

Navigation Committee

AGENDA

Thursday 25 October 2018

2.00pm

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1. To receive apologies for absence	
2. To note whether any items have been proposed as matters of urgent business	
3. To receive declarations of interest	
4. Public Question Time To note whether any questions have been raised by members of the public	
5. To receive and confirm the minutes of the Navigation Committee meeting held on 6 September 2018	3 – 9
6. Summary of Actions and Outstanding Issues following Discussions at Previous Meetings Report by Administrative Officer	10 – 11
7. Chief Executive's Report and Current Issues Report – Members are asked to notify the Governance Team at least three days in advance of the meeting of issues they would like to raise	12 – 17
8. Proposed Navigation Charges for 2019/20 in the Navigation Area and Adjacent Waters Report by Chief Executive, Chief Financial Officer and Collector of Tolls	18 – 35
9. Water Ski Permit – amendment to conditions Report by Head of Safety Management	36 – 43
10. PMSC Aids to Navigation – Trinity House Report by Head of Safety Management	44 – 68
11. Sediment Management Strategy Compliance Report by Senior Waterways and Recreation Officer	69 – 71

12. **Construction, Maintenance and Environment Work Programme Progress Update**
Report by Head of Construction, Maintenance & Environment
13. **To note the date of the next meeting – Thursday 17 January 2019 at Yare House, 62-64 Thorpe Road, Norwich commencing at 2.00pm**

Navigation Committee

Minutes of the meeting held on 6 September 2018

Present:

Mrs Nicky Talbot – in the Chair

Mr K Allen

Mr B Dickson

Mr M Whitaker

Mr J Ash

Mr J Knight

Mr B Wilkins

Ms L Aspland

Mr S Sparrow

In Attendance:

Mr S Birtles – Head of Safety Management (item 8)

Mrs L Burchnall – Head of Ranger Services (item 7)

Mr D Harris – Solicitor and Monitoring Officer

Dr D Hoare – Head of Construction, Maintenance and Environment

Ms E Krelle – Chief Financial Officer (item 11)

Miss S Mullarney – Administrative Officer

Dr J Packman – Chief Executive

Ms Ruth Sainsbury – Planning Officer (item 9)

Mrs C Smith – Head of Planning (item 10)

Also Present:

Lana Hempsall.

3/1 To receive apologies for absence

Apologies for absence were received from, Matthew Bradbury, Alan Goodchild, Max Heron and Greg Munford. Max Heron provided the Chair with comments on the agenda; these were read out at the relevant items.

The Chair welcomed Bill Dickson to his first meeting. Bill was appointed to the committee at the Broads Authority meeting on 27 July 2018.

The Chair also announced that the appointment process for the co-opted members of the Navigation Committee for 2019-22 was due to commence. The current co-opted members were reminded that they would need to apply for membership unless they would have completed the maximum 8 year term by March 2019. The deadline for applications is Friday 19 October.

The Chair proposed a variation to the order of the agenda: Item 10 Lake Lothing Third River Crossing to be discussed before item 9 Planning Application with Navigation Implications BA/2018/0312/FUL Marina Quays.

Recordings

The Chair announced that the meeting would be recorded and that the copyright remains with the Authority; however a copy of the recording could be requested.

James Knight declared that he would be making his own recording.

3/2 To note whether any items have been proposed as matters of urgent business

No items were proposed as a matter of urgent business.

3/3 To receive Declarations of Interest

Members expressed their declarations of interest as set out in Appendix 1 of these minutes.

Simon Sparrow mentioned that he knew the applicant for item 9.

3/4 Public Question Time

No public questions were raised.

3/5 To receive and confirm the minutes of the Navigation Committee meeting held on 14 June 2018

One member questioned the decision at the last meeting to reduce the number of formal Navigation Committee meetings to five rather than four as the Broads Authority had done. The Chair reminded the committee that this decision was made with the view to reviewing the situation in a year's time.

The minutes of the meeting held on 14 June were signed by the Chairman as a correct record of the meeting.

3/6 Summary of Actions and Outstanding Issues following Discussions at Previous Meetings

Members received a report summarising the progress of issues that had recently been presented to the Committee.

The Solicitor and Monitoring Officer had recently facilitated a meeting with Prof. Williamson and Thorpe Town Council, who were due to meet again soon. Members were informed that the Staithes report was close to being finalised and published.

Members noted the report.

3/7 Chief Executive's Report and Current Issues

Swing Bridges Workshop

The Chief Executive thanked the Members that attended the workshop. The action list would be followed up at the next meeting with Network Rail. Members were informed that Network Rail had upgraded their telephone system and were in the process of upgrading the signalling system. From next spring this would put the bridge operators in a better position to respond to boat owners. In the meantime Broads Control has been acting as an intermediary.

A Member said the workshop was positive and suggested there be a further meeting for road bridges to discuss access to the Broads.

Incident on the River Chet

Following a serious incident on the river Chet in June which resulted in a hire boat sinking after it had hit an underwater metal obstruction, members were told that following subsequent site visits and surveys, the removal of the dangerous piling and re-profiling of the bank was in the Environment Agency's work programme for October.

The Chief Executive further informed members that BESL had removed the most hazardous of the deformed stone filled gabion baskets at Haddiscoe New Cut and had a rolling programme to attend to those gabions that have lost their stone filling. He added that Broads Authority officers were in the process of looking at all flood defence piling which has deteriorated and presents a navigation hazard. These would be mapped and prioritised to enable the Environment Agency to deal with the greatest hazards.

The Chief Executive added that there was also an issue with areas of piling that were no longer considered part of the flood defence. It was noted that the Environment Agency may not retain responsibility for these. Options for retention would be reviewed for the significant areas; the committee would receive a report on this in the future.

Reservation of Moorings

The Chief Executive explained that there was no formal policy on reserving moorings. It was noted that the requests for sections of moorings to be reserved for particular crafts had increased. A member commented that responses to enquires about reserving moorings in 2018 had not been coordinated very well. It was highlighted that 24 hour moorings were provided for the public and as a result, it would not be appropriate to reserve these at popular locations such as at Ranworth during the main holiday season. A member connected with the Wherry Yacht Charter commented that for 99% of the time there was not an issue. The Broads Authority continued to support the wherries and provisions would be made at the yacht stations to accommodate them. The Broads Authority would be meeting with the Wherry Yacht Charter in the autumn to explore other options.

Frequency of Ranger Patrols

The Chief Executive commented that the number of person days for 2018 was identical to that in 2000, but the Authority was doing more with the same amount of resource. The emphasis was on patrolling at weekends in the summer and some areas, such as downstream of Wroxham and Breydon Water, required greater attention. In addition to the rangers, 50 volunteers assisted with patrols.

One member commented on the risk to small boat owners from speeding boats on the River Yare. He said that a report from the Broads Angling Services Group on this subject was due and proposed this as an item for a future navigation committee meeting. The Chief Executive reminded members that Broads Control was available and advised that speeding boats be reported. The Head of Safety

Management added that the stakeholder hazard review was due in the New Year, which would include speeding boats.

BA/2018/0149/FUL Broadlands Marina, Oulton Broad

The Head of Ranger Services provided an update on the development at a members request; members were informed that the application was on hold pending further discussion. A meeting has been scheduled for the end of September with relevant interested navigational parties.

3/8 New Boat Safety Scheme carbon monoxide alarm requirement

Members received a report on the Boat Safety Scheme's proposal for the mandatory installation of CO alarms on boats with accommodation spaces. The consultation is live and the Broads Authority has formally consulted bodies which represent boating interests as it is a proposed new requirement of the scheme. The BSS is conducting the consultation on behalf of the navigation authorities.

The Head of Safety Management identified that the sources of carbon monoxide were not just from large petrol engine boats but from normal gas cookers and BBQs. One member stressed the huge risk from BBQs and suggested this be highlighted when the scheme is published.

Members asked for clarification on the installation of the CO alarms and discussed how the new requirement would affect different vessels. The Head of Safety Management explained that the alarm would need to be permanently fixed and said the BSS technical committee had discussed the issue of boats with canopies. It was added that dependent on the size of the boat and the accommodation compartments, multiple alarms would be required.

Members also discussed the boats that do not qualify for Boat Safety Scheme assessments and whether they would be required to install a CO alarm. The Head of Safety Management concluded that the intention wasn't to extend the scope of the BSS but as an additional requirement to the existing checking procedure.

Members were in support of the proposal. The views of the committee would be submitted as part of the consultation process.

Agenda Item 10 Lake Lothing Third River Crossing was dealt with at this point.

**3/9 Planning Application with Navigation Implications
BA/2018/0312/FUL Marina Quays**

The Planning Officer presented Members with the application for the installation of new moorings and refurbishment of the buildings at Marina Quays, Great Yarmouth. The Chair made Members aware that the applicant was present for the meeting.

Members welcomed the proposed development for the area and the additional moorings, however it was noted that some moorings might not be appropriate due

to the high build up of silt and width of the river. Members also highlighted safety issues for visitors who wouldn't be familiar with the tidal flow of the river. Members agreed single alongside moorings would be appropriate, with one member suggesting the applicant consider floating pontoons. Another member expressed concerns with narrowing the river unduly. A member queried the state of the quay heading and if the applicant was taking on the liability of maintaining this.

Members discussed the sediment maintenance of the site and the practicality of dredging. One member noted that there was the potential for boats to sit on a sloped edge at low tide. It was added that the applicant needed to consider how moorings were managed to avoid the dangers of boats sitting at an angle. Another member commented that the sediment pattern was likely to change when boats were moored at the site. The Head of Construction, Maintenance and Environment explained that the main section of the river was dredged to maintain navigation, however dredging closer to the piled edge would need consultation with the Environment Agency.

In response to a question about the condition of the concrete wall it was explained that it ran along the formal flood defence and any repairs or maintenance was the Environment Agency's responsibility.

The Head of Planning summarised that the committee had no in principle objections to the application but raised details around the sediment management, dredging, and safety of the visitor moorings. These views would be considered as part of the planning process.

3/10 Lake Lothing Third River Crossing

Agenda Item 9 Planning Application with Navigation Implications BA/2018/0312/FUL Marina Quays was dealt with at this point.

The Head of Planning presented Members with the Suffolk County Council application for a third river crossing at Lake Lothing, Lowestoft. Members watched a fly by video of the site and discussed the implications for the navigation.

Members noted that the proposal facilitated the broads navigation connecting to the sea; it was also noted and that the majority of leisure boaters would not require the bridge to open. One member commented on the importance of layby moorings at the bridge. Members were in favour of the rejuvenation of this part of Lowestoft with one member stating that it would attract new boaters.

Members were in support of the proposal and it was unanimously agreed that the committee did not feel that the proposal impeded navigation to the navigation area. The views of the committee would be reported at the 14 September Planning Committee meeting. A response from the Broads Authority would be fed back to the Planning Inspectorate as part of their consultation.

3/11 Navigation Income and Expenditure: 1 April to 30 June 2018 Actual and 2018/19 Forecast Outturn

The Committee received a report on the details of the actual navigation income and expenditure for the three month period to 30 June 2018, and provided with a forecast of the projected expenditure at the end of the financial year.

The Chief Financial Officer provided members with an update on the income and expenditure at the end of August. She stated that 96% of the private craft toll income had been collected and that the hire craft toll income was £9,300 ahead of the annual budget. There were no changes to the forecast.

The Chief Financial Officer explained that there was a favourable variance of £48,502 due to delayed capital purchases including the purchase of the tree shears. The Head of Construction, Maintenance and Environment confirmed that an excavator and floats had been purchased and the tree shears ordered. Members were invited to view the new tree management equipment from a Ranger launch when it would be used for the first time at Barton Broad.

The Chair thanked the Chief Financial Officer and commented that the updated figures were more favourable than the report suggested. She reminded members that the proposed toll charges would be discussed at the next meeting.

Members noted the report.

3/12 Construction, Maintenance and Environment Work Programme Progress Update

The Head of Construction, Maintenance and Environment provided members with an update on the work programme progress for 2018/19.

Members were informed that the start date for mobilisation and installation of the geotextile tubes onsite at Hickling was due to start in early October. It was noted that a lot of officer time would be required to set the job up but that the work would give 19,000m³ worth of sediment capacity.

It was also reported that the Broads Authority had purchased its own concrete pump for the work at Hickling. The Head of Construction, Maintenance and Environment explained that this proved to be an effective method for reusing sediment. He further added that a larger yard crane had been purchased to enable work to be completed in house and to reduce the external capital expenditures.

Members noted the report.

3/13 To note the date of the next meeting

The next meeting of the Navigation Committee would be held on Thursday 25 October 2018 at Yare House, 62-64 Thorpe Road, Norwich commencing at 2pm.

The meeting concluded at 15:50

Chairman

Code of Conduct for Members

Declaration of Interests

Committee: Navigation Committee

Date of Meeting: 6 September 2018

Name Please Print	Agenda/ Minute No(s)	Nature of Interest (Please describe the nature of the interest)	Please tick here if the interest is a Prejudicial interest
Bill Dickson	-	-	
Simon Sparrow	All	General	
Linda Aspland		As previously stated	
Kelvin Allen	-	-	
John Ash	7.6	Non pecuniary as trustee Wherry Yacht Chart Charitable Trust	
Michael Whitaker	6-12	No changes from previously	
Brian Wilkins	-	Interests all as previously advised	
Nicky Talbot	7.3	Employee of Norfolk Wildlife Trust – Interest as previously advised	
James Knight	6-12	As previously advised	

Summary of Actions and Outstanding Issues Following Discussions at Previous Meetings
Report by Administrative Officer

Date of Meeting and Minute No	Discussion	Responsible Person	Summary of Actions and Outstanding Issues
20 April 2017 Minute 1/8 Summary of Actions and Outstanding Issues following Discussions at Previous Meetings	Prof Williamson had been chased for the Staithes report and the Authority hoped to receive the maps by the end of April.	Senior Waterways & Recreation Officer	Revised text has been agreed with Thorpe Town Council and Prof Williamson. The final report will be published in the near future.
19 October 2017 Minute 2/17 Items for future discussion	Network Rail Whole Life Strategy for swing bridges and replacing Trowse Swing Bridge with a fixed bridge.	Chief Executive	Officers met with Network Rail on 25 September, the action points from the 1 August workshop were reviewed: <ul style="list-style-type: none"> • Bridge failure affecting river traffic data is being captured by Network Rail from 1 Oct 2018 • High impact days, when events or regattas require multiple bridge openings, to be shared with Network Rail (2019 programme) • Network Rail will better explain issues using social media and bridge sign. • Network Rail to look into alternative VHF channel. Broads Authority assisted with information and where to apply. • Sensor/System improvements to

Date of Meeting and Minute No	Discussion	Responsible Person	Summary of Actions and Outstanding Issues
			<p>Somerleyton due to start in April/May 2019</p> <ul style="list-style-type: none"> • Network Rail to use their social media (24hr Twitter) to inform on swing bridges • Reedham Bridge was watered on hot days, but when temperatures exceeded 25-28 degrees this had very little effect of shrinking hot rails. Network Rail will continue to water on hot days. • Recent damage to Reedham was attended to and repaired within three days. <p>Next liaison meeting due in March 2019.</p>
<p>14 December 2017 Minute 3/10 Unauthorised Development with Navigation Implications</p>	<p>Unauthorised development at Barnes Brinkcraft in Hoveton.</p>	<p>Head of Planning</p>	<p>Following protracted negotiations, the landowners have now agreed a scheme in line with that which the Navigation Committee had been prepared to support.</p> <p>Planning permission was granted at the 14 September 2018 Planning Committee meeting, subject to conditions including a management plan to cover operation of the site. Discussions are underway on the content of the management plan.</p>

Chief Executive's Report and Current Issues

Purpose: The purpose of this report is to brief the Committee on significant matters relating to the maintenance and management of the waterways and to provide an opportunity for members of the Committee to raise any such issues.

1. Acle Bridge

At the 28 September Broads Authority meeting members discussed the potential development of the Acle Bridge Visitor and Education Centre. Members received a presentation from Feilden and Mawson on the further design work the company had undertaken together with an analysis of the costs of construction. Planning Solutions Consulting Ltd were in attendance to provide their conclusions on the business analysis.

Members discussed a range of options as to how to take forward the refurbishment and development of the site and decided:
To proceed with the essential repairs to the moorings at the Acle Bridge site subject to the views of the Navigation Committee;
To investigate whether the development of a Visitor and Education Centre could form an important element in a wider more ambitious project to improve the infrastructure for Broads tourism and raise awareness of the special qualities of the area in future.

2. National Parks Review

At the Broads Authority meeting on 28 September members were invited to suggest issues, which officers could investigate as the basis for a response to the call for evidence based on the eight areas the Review were asked to consider.

Members raised the following points:

- **Extending or creating new designated areas** Extension of the boundary: To consider the potential for extending the boundary to create a more coherent Park area, due to the difficulty of not having whole parishes within the Broads area.
- **Governance:** To consider the structure of the Broads Authority and have a more effective means of engaging with the navigation interests.
- To recognise the importance of those with specific expertise being included on the main board, not necessarily relying on those elected.

- **Finance:** To emphasise the impact from Brexit and the loss of that potential source of funding, if this is not replaced.
- To ensure that the Natural Capital of National Parks is recognised not only for commercial and environmental purposes but for the wellbeing of people, visitors and the local communities and:
- **Enhancing our environment and biodiversity** To raise awareness of the uniqueness of the Broads, its special ecosystem and its fragile nature. To emphasise the impact of climate change/sea level rise and the potential increase in flooding as well as the potential for increased incursion of salt water into a fresh water system. To raise the importance of flood defences and the role of and links with the Environment Agency.
- **Legislation for the Future** for the Authority to deliver the vision for the Broads. Eg; The Authority to have similar powers to the Highways Authority to ensure navigation is not impeded. ie: to deal with maintenance and neglect of riverbanks by landowners
- **Connecting more people with the environment and improving well-being:** To improve facilities and access to the Broads for all and especially providing boating facilities for those with disabilities.
- **Supporting Communities through Purposes:** At present, the National Park Authorities and the Broads Authority had the responsibility to take account of those who live and work in the area and their economic wellbeing. This could become a purpose and therefore strengthen the Authority's ability to engage.
- **Finance:** To ensure there is sufficient finance to carry out the duties and responsibilities for managing the National Park.

3. **Navigation Patrolling and Performance Targets**

Contact Officer/Broads Plan Objective: Lucy Burchnall/4.3

The report of the significant use of powers by the rangers is displayed in Appendix 1.

A member of the Committee has specifically raised the issue of speeding on the River Yare. Combining the figures from both the launches on the Yare (Norwich and Hardley launches) the total number of verbal warnings given is 490. When compared with the average number of verbal warnings issued over the last 4 years (average of 324) this shows an increase.

Verbal warnings are given for slight speed over the limit (at Rangers discretion and dependent to other factors, but up to 1mph above). It is worth noting that both launches have higher staffing levels this season

particularly around weekends which may account for some of this increase.

Written warnings for more serious offences are however lower for the river Yare than the average for the last 4 years with a total of 5 'Blue Book' (Memorandum of Navigational) warnings issued for speeding so far this year compared to the average of 10. Some of these cases have or may be going forward for prosecution.

We always follow up on any reports of speeding reported to our Control office or to rangers directly.

Appendix 2 shows the average navigation/countryside splits. Conservation tasks are now starting across the areas.

4. Sunken and Abandoned Vessel Update

Contact Officer/Broads Plan Objective: Lucy Burchnall/4.3

The sunken and abandoned update is contained in Appendix 3.

5. Planning Enforcement Update

Contact Officer/Broads Plan Objective: Cally Smith/None

There are no further enforcement matters with navigation implications to report.

Background papers:	None
Author:	John Packman
Date of report:	October 2018
Broads Plan Objectives:	Multiple
Appendices:	APPENDIX 1 - Rangers Exercise of Powers Analysis
	APPENDIX 2 - Ranger Duties
	APPENDIX 3 - Sunken and Abandoned Vessels

APPENDIX 1

Rangers Exercise of Powers Analysis <i>(Bracketed figures are running totals, April 2018 to March 2019)</i>						Date: Aug-Sep 2018		
	Wroxham Launch	Irstead Launch	Ludham Launch	Ludham 2 Launch	Norwich Launch	Hardley Launch	B.St.Peter Launch	Breydon Launch
Launch Patrol Areas	Wroxham and Upper Bure	Ant	Hickling, P.Heigham, Upper Thurne & Womack	Lower Thurne, Lower Bure & South Walsham	Norwich and Upper Yare	Reedham, Chet & Middle Yare	Oulton Broad and Upper/Middle Waveney	Breydon Water, Lower Waveney and Yare
Verbal Warnings								
Care & Caution	16 (36)	4 (12)	12 (24)	38 (114)	(1)		2 (8)	8 (13)
Speed	963 (2173)	406 (1089)	62 (455)	204 (545)	175 (352)	55 (138)	66 (190)	48 (120)
Other	28 (68)	26 (60)	14 (29)	20 (54)	5 (40)	11 (46)	1 (26)	1 (4)
Blue Book Warnings								
Care & Caution	(5)	3 (4)	(1)	(1)			(1)	2 (6)
Speed	12 (33)	2 (18)	(7)	1 (6)	1 (4)	1 (8)	4 (5)	(5)
Other	2 (7)	18 (35)	4 (18)	2 (7)		1 (12)	2 (4)	(4)
Special Directions	7 (146)	(78)	55 (85)	(63)	3 (3)		44 (383)	4 (4)
Launch Staffed (by Ranger)								
Launch Staffed (by Ranger)	57 (172)	48 (136)	46 (150)	48 (92)	49 (141)	33 (99)	44 (129)	61 (183)
Best Value Patrol Targets Percentage Compliance	100% (100%)	100% (100%)	100% (100%)	100% (100%)	97% (95%)	100% (100%)	79% (90%)	89% (90%)
Volunteer Patrols		1 (3)		2 (3)				
IRIS Reports	22 (99)	22 (75)	14 (59)	12 (48)	20 (63)	14 (49)	20 (85)	31 (92)
Broads Control Total Calls	TOTAL 8,831 (26,459)			Telephone 6,746 (20,199)		VHF 2,085 (6,260)		

Total Time Allocated/Actual Ranger Team

Up to 08 October 2018

Broads Authority Corporate	Work Area	Annual Allocation	Actual Days To Date
Corporate Time	Training	134	54.70
	Broads Control	39	23.17
	Team meetings / work planning	349	214.36
	Partnership working	82	48.14
	Assisting other sections	94	26.01
	Annual Leave		265.41
	Off Work Sick		41.52
	Time in Lieu		23.51
Premises Maintenance	Billets and boatsheds	19	15.37
Vessel & Equipment Maintenance	Launch - General		9.56
	Trailers - General		1.08
	Vehicle Maintenance		7.16
	Other equipment repair		18.45
Total		717	748.43

Navigation	Work Area	Annual Allocation	Actual Days To Date
Navigation Maintenance	Patrolling	1356	1061.73
	Escorts	35	30.41
	Prosecution files	0	25.74
	Bankside tree management	101	30.24
	Obstruction removal	29	12.30
	Channel markers & buoys	41	8.72
	Signs & boards maintenance	73	30.61
Mooring Maintenance	Adjacent Waters		66.86
	Reactive mooring maintenance	129	26.42
Total		1764	1293.01

Actual Percentage	82%
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Conservation, Rec, C'side	Work Area	Annual Allocation	Actual Days To Date
Conservation	Fen management	14	1.49
	Lake / Riverbank restoration	10	0.00
	Invasive Species Control	33	0.14
	Other conservation work	202	2.03
	Pollution Response		0.14
Recreation/Countryside Maintenance	Visitor Site maintenance	185	130.27
	Whitlingham Country Park	300	138.48
Public engagement	Public footpath work	14	0.00
	Education work	20	13.18
Total		778	285.71

Actual Percentage	18%
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Team total	3259	2327.16
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Sunken and Abandoned Vessels

Description	Location found	Action	Notice Affixed	Result
Motor Cruiser	River Yare Old River Thorpe.	Vessel sunk at owners moorings	No	Not affecting the navigation owner will raise in due course
Motor Cruiser	Oulton Broad	Harbour Master liaising with owner	No	Not affecting the navigation Oulton Broad Harbour Master liaising with owner
Yacht	Geldeston	Liaising with owner	No	Authority liaising with owner
Yacht	Somerleyton	Abandoned Notice expired. Hazard marked	Yes	Not a hazard, will be removed by Authority
Motor Cruiser	Beccles	No owner found for vessel.	Yes	Removed from water by Boatyard.
Yacht	Rockland	Vessel sunk adjacent to 24 hour moorings. Hazard marked. No owner traced.	Yes	Awaiting deadline for Notice on 21 st October.
Yacht	Dockyard	Owner needs to remove	No	Letter written asking for vessel to be removed or will be sold to cover costs.

**Proposed Navigation Charges for 2019/20
in the Navigation Area and Adjacent Waters**
Report by Chief Executive, Chief Financial Officer and Collector of Tolls

Purpose: This report consults the Navigation Committee on the proposed level of charges for 2019/20.

Summary: Following consultation with members of the Tolls Review Group on options for additional expenditure this report seeks the views of the Navigation Committee on the following proposals for next year's tolls which are unanimously supported by the Group and officers.

- (i) In line with previous Broads Authority decisions an 'across the board' approach should be adopted with navigation income increasing at the same rate for the whole of the hire fleet and the private fleet.
- (ii) That tolls be raised just below the rate of inflation at c.+2.6% (CPI in August = 2.7%) to maintain the existing level of service (+2.1%) and provide for the installation of electric charging points (+0.5%) at the Acle Bridge mooring which is due to be refurbished next year.
- (iii) If implemented the proposed cash increases for the most common sizes and categories of craft would be as follows:

	Number of Boats (30 Sep 2018)	2018/19	2019/20	Increase p.a.
Private sailing craft				
5 m²	504	£41.20	£42.30	+£1.10
11 m²	143	£90.64	£93.06	+£2.42
Private motor boats				
5 m²	721	£66.20	£67.95	+£1.75
15 m²	256	£198.60	£203.85	+£5.25
22 m²	336	£291.28	£298.98	+£7.70
38 m²	108	£503.12	£516.42	+£13.30
Day hired boats				
12 m²	72	£547.56	£561.84	+£14.28
Weekly hired motor craft				
38 m²	60	£1,133.16	£1,162.80	+£29.64
48 m²	61	£1,431.36	£1,468.80	+£37.44

Note: A complete list of the increases for all categories and sizes of craft is contained in Appendix 1.

1. Progress over the last year

- 1.1 Last November at its meeting the Broads Authority followed the advice of the Navigation Committee and raised charges in the Navigation Area and Adjacent Waters for 2018-19 by 3% across the board. This was in line with the Authority's financial plan and took account of the rate of inflation (CPI was 2.9% and RPI 3.9% as at August 2017). A range of options for additional expenditure was evaluated and it was resolved to purchase new equipment for bankside tree and scrub management and additional safety signs.
- 1.2 In line with that decision five electronic speed signs have been purchased. Four have been deployed and the Ranger Team rotate the locations between the Yare (Postwick) the Waveney (Waveney River Centre) the Thurne (Potter Heigham) and the Bure (Wroxham). Initial feedback indicates that they are effective in moderating the speed of vessels with fewer reports of speeding through sites since they have gone up.
- 1.3 The mechanical equipment, consisting of an excavator, floats and tree shears, to improve the effectiveness of the Authority's management of bankside trees and scrub has been purchased and was planned to be demonstrated to members this morning 25 October 2018.

2. Navigation Income and Expenditure 2018-19

- 2.1 Navigation income in the current year to date is above that budgeted. The total variance has moved to a favourable variance of £30,104 or 1.84% difference from the profiled Latest Available Budget (LAB). There have been no further movements to the latest available budget reported in September and the reasons for variances, excluding income, have remained the same. Table 1 below provides an overview of actual income and expenditure

Table 1 Actual Navigation Income and Expenditure to 31 August 2018

	Profiled Latest Available Budget	Actual Income and Expenditure	Actual Variance
Income	(3,218,705)	(3,218,812)	+ 107
Operations	1,087,825	1,036,031	+ 51,794
Strategic Services	270,686	253,992	+16,694
Chief Executive	235,231	249,292	- 14,061
Projects, Corporate Items and Contributions from Earmarked Reserves	(8,100)	16,330	- 24,430
Net (Surplus) / Deficit	(1,633,063)	(1,663,167)	+ 30,104

- 2.2 The Predicted Outturn for 2018/19 is shown in Table 2 being £22,762 above the Latest Available Budget. This has increased by £12,960 since the report in September. This is mainly due to the increase in interest rates and salary savings within the tolls team.

Table 2 Budget compared to Predicted Outturn for 2018/19

	Latest Available Budget 2018/19	Predicted Outturn 2018/19
Navigation Income	(3,338,300)	(3,353,360)
Expenditure	3,341,353	3,333,652
(Surplus)/ Deficit	3,053	(19,709)
Transfer of accrued interest to ear-marked reserves	3,750	7,500
Opening Reserves	367,662	367,662
Closing Reserves	360,860	379,871
Reserves as % of Expenditure	10.8%	11.4%

2.3 The Authority has completed the sale of the Ludham Field Base and the resultant capital receipt has been shared 60:40 between the National Park and Navigation. The receipt has to be ring fenced on the Balance Sheet for new capital expenditure or the repayment of debt.

3. Context

3.1 The current rate of inflation is below the figure for the same period last year with the Consumer Price Index (CPI) at 2.7%, and the Retail Price Index (RPI) at 3.5% (August 2018).

3.2 After a very wet and cold spring the hot summer has meant that the hire boat industry has had, what they describe as a satisfactory year and the Authority's own income has also recovered from a poor start.

3.3 However, the economic outlook is extremely uncertain not just around the UK's exit from the European Union but also regarding the fortunes of the world economy. Both are likely to impact not only on visitor numbers to the Broads but also on our private toll payers and therefore our advice is to be cautious in setting charges for the coming year.

3.4 Although we live in uncertain times boat numbers and toll income have held up well. Table 3 shows the number of private boats by category and although the total number has fallen by just 58 (0.5%) income is within £2,400 (-0.1%) of that predicted. Table 4 which looks at the largest category, private motor boats, shows that the increases experienced 2016-17 in the number of small boats has held up.

Table 3 Private Boats by Category

Private Boats	30 Sep 2017	30 Sep 2018	Change	% Change
Motor Cruisers	5064	5022	-42	-0.8%
Auxiliary Yachts	1122	1086	-36	-3.2%
Day Launches	546	561	15	2.8%
Outboard Dinghies	1052	1036	-16	-1.5%
Workboats	158	155	-3	-1.9%
Passenger Vessels SPB	22	21	-1	-4.6%
Total Motor Boats:	7964	7881	-83	-1.0%
Sailing Craft	1066	1068	2	0.2%
Rowing Craft	1477	1499	22	1.5%
Houseboats	45	46	1	2.2%
Total Sailing Boats	2588	2613	+25	1.0%
Total Private Boats	10552	10494	-58	-0.6%

**Table 4 Private motor boat fleet
(Motor cruisers, day launches & outboard dinghies)**

Size m ²	2016	2017	2018	Change 2017-18	Change 2016-18
1-10	1,646	1,820	1,818	-2	172
11-20	1,895	1,893	1,867	-26	-28
21-30	1,604	1,609	1,603	-6	-1
31-40	870	882	865	-17	-5
41-50	374	370	375	5	1
51-60	67	63	63	0	-4
61-70	16	14	18	4	2
71-80	2	4	6	2	4
81-90	3	3	2	-1	-1
91-100	2	2	1	-1	-1
101-110	1	2	1	-1	-
Grand Total	6,480	6,662	6,619	-43	139

- 3.5 Table 5 shows the year on year comparison for the number of hire boats and indicates that the total number has increased by 12. The impact of this is that hire boat income is just under £10,000 above the predicted level.

Table 5 Number of Hire Boats 2017-18

Hire Boats	2017	2018	Change	% Change
Motor Cruisers	802	806	4	0.5%
Auxiliary Yachts	45	46	1	2.2%
All Cabin Hire Boats:	847	852	5	0.6%
Day Launches	290	301	11	3.8%
Outboard Dinghies	9	9	0	0.0%
Passenger Vessels MCA	6	6	0	0.0%
Passenger Vessels SPB	6	7	1	16.7%
Total Motor Boats:	1158	1175	17	1.5%
Sailing Craft	101	95	-6	-5.9%
Rowing Craft	191	194	3	1.6%
Houseboats	28	26	-2	-7.1%
Total	1478	1490	12	0.8%

Thus while the economic context may be uncertain the position on boat numbers and navigation income and expenditure is reasonably favourable.

4. Pressures on 2019-20 Navigation Expenditure

- 4.1 In considering the level of charges for next year a number of pressures on Navigation Expenditure need to be taken into account.
- A 2% pay increase for staff
 - Increased employer pension costs
 - Need for additional expenditure to remove wrecks
 - The 'low hanging fruit' in terms of dredging have been dealt with and the dredging budget needs further expenditure if the Authority is to maintain its target of 50,000 m³ of material removed per annum
 - The cost of servicing and repairing launches is increasing
 - Breydon marker posts need replacement
 - Legal fees - increased navigation prosecutions for boat owners not paying the required toll. The Broads Authority has no option but to prosecute as a last resort if the owner fails to pay.
- 4.2 All of these pressures mean that charges need to increase by 2.1% to maintain the existing standard of service and carry out essential maintenance work.

5. Options for Additional Expenditure

5.1 A range of actions requiring additional expenditure were presented to the members of the Tolls Review Group including:

- The installation of electric charging points at the Acle Bridge mooring which is planned to be refurbished next year. (+0.5%)
- Additional expenditure so that the repairs of the Acle Bridge moorings could be undertaken in one year rather than spread over two financial years. (+1.2%)
- Funding for a repeat of the stakeholder survey. (+0.9%)

5.2 The members of the Tolls Working Group decided to recommend the installation of the electric charging points only, which would result in an increase in charges of 2.6%. It was suggested that officers investigate a phased approach to the stakeholder survey.

6. Draft Income and Expenditure for 2019/20

6.1 Based on the above proposition a draft income and expenditure budget has been developed for 2019/20. See Tables 6 and 7 below.

Table 6 Projected income by fleet

	Projected Income 2019/20
Hire Boat Income	£1,189,000
Private Boat Income	£2,175,000
Other Income	£76,000
TOTAL	£3,440,000

Table 7 Draft income and expenditure 2019/20

	Draft Budget 2019/20 +2.6%
Navigation Income	£3,440,000
Expenditure	£3,462,000
(Surplus)/ Deficit	£22,000
Transfer of accrued interest to ear-marked reserves	£7,500
Opening Reserves	£379,871
Closing Reserves	£350,371
Reserves as % of Expenditure	10.1%

7. Charges for Categories of Boats

7.1 Taking the advice of the Tolls Review Group the charges for the different categories of boats have been calculated and are replicated in Table 8 for a c.

2.6% increase. They have been rounded up to the next whole penny.

**Table 8 Proposals for Charges for 2019/20
Commercial Fleet**

<i>Category</i>	<i>Current Charge</i>	<i>Proposed Charge</i>
1. Weekly hired motor craft	£29.82 per m ²	£30.60 per m ²
2. Weekly hired motor craft Electric	£20.91 per m ²	£21.46 per m ²
3. Day hired	£45.63 per m ²	£46.82 per m ²
4. Day hired Electric	£31.83 per m ²	£32.66 per m ²
5. MCA Passenger Boats and small passenger boats	£39.25 per m ²	£40.27 per m ²
6. Motorised Sailing Craft	£24.21 per m ²	£24.84 per m ²
7. Sailing Boats	£18.03 per m ²	£18.50 per m ²
8. Houseboats	£15.40 per m ²	£15.80 per m ²
9. Rowing, canoes etc.	£67.68	£69.44

Private Fleet

<i>Category</i>	<i>Current Charge</i>	<i>Proposed Charge</i>
10. Motor Boats - petrol & diesel	£13.24 per m ²	£13.59 per m ²
11. Motor Boats Electric	£10.30 per m ²	£10.57 per m ²
12. Motorised Sailing Craft	£9.79 per m ²	£10.05 per m ²
13. Sailing Boats	£8.24 per m ²	£8.46 per m ²
14. Houseboats	£5.31 per m ²	£5.45 per m ²
15. Rowing, canoes etc.	£33.84	£34.72

- 7.1 Appendix 1 contains a schedule showing the implications of the three options for each category and size of boat.

8. Evaluation and Risk Analysis

- 8.1 An increase just below inflation is consistent with the Authority's agreed policy following the major restructuring of charges two years ago. Given that the broader economic position is uncertain a 2.6% increase across the board is prudent in recognising the pressures on both the commercial and private owners of boats while providing sufficient resources to maintain the current standard of maintenance.

9. Equalities and Social Impact

- 9.1 There is no evidence to suggest that an across the board increase of 2.6% will have a disproportionate impact on any particular group of owners.

10. Conclusions

- 10.1 It is important that the Authority retains a balanced approach to charges between raising the necessary resources to undertake essential maintenance work while recognising the financial pressures on both commercial and private boat owners. With boat numbers remaining relatively stable an increase just below the August rate of inflation is prudent.

Background papers: None

Authors: John Packman, Emma Krelle, Bill Housden
Date of report: 16 October 2018

Broads Plan Objectives: None

Appendices: APPENDIX 1 – Draft charges for 2019/20

Schedule Showing 2.6% Increase in Charges for 2019/20

Category 1 - Weekly hired motor craft				
Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
12	14	357.84	367.20	9.36
13	3	387.66	397.80	10.14
15	8	447.30	459.00	11.70
17	1	506.94	520.20	13.26
18	4	536.76	550.80	14.04
19	8	566.58	581.40	14.82
20	13	596.40	612.00	15.60
21	10	626.22	642.60	16.38
22	19	656.04	673.20	17.16
23	9	685.86	703.80	17.94
24	2	715.68	734.40	18.72
25	5	745.50	765.00	19.50
26	7	775.32	795.60	20.28
27	8	805.14	826.20	21.06
28	39	834.96	856.80	21.84
29	12	864.78	887.40	22.62
30	21	894.60	918.00	23.40
31	13	924.42	948.60	24.18
32	11	954.24	979.20	24.96
33	16	984.06	1009.80	25.74
34	14	1013.88	1040.40	26.52
35	23	1043.70	1071.00	27.30
36	20	1073.52	1101.60	28.08
37	67	1103.34	1132.20	28.86
38	60	1133.16	1162.80	29.64
39	30	1162.98	1193.40	30.42
40	20	1192.80	1224.00	31.20
41	21	1222.62	1254.60	31.98
42	27	1252.44	1285.20	32.76
43	18	1282.26	1315.80	33.54
44	57	1312.08	1346.40	34.32
45	10	1341.90	1377.00	35.10
46	58	1371.72	1407.60	35.88

Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
47	9	1401.54	1438.20	36.66
48	61	1431.36	1468.80	37.44
49	4	1461.18	1499.40	38.22
50	29	1491.00	1530.00	39.00
51	19	1520.82	1560.60	39.78
52	25	1550.64	1591.20	40.56
54	4	1610.28	1652.40	42.12
56	2	1669.92	1713.60	43.68

Category 2 - Weekly hired motor craft electric

Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
40	1	836.40	858.40	22.00
41	1	857.31	879.86	22.55
48	3	1003.68	1030.08	26.40

Category 3 - Day hired boats

Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
5	4	228.15	234.10	5.95
6	5	273.78	280.92	7.14
7	4	319.41	327.74	8.33
8	17	365.04	374.56	9.52
9	29	410.67	421.38	10.71
10	43	456.30	468.20	11.90
11	51	501.93	515.02	13.09
12	72	547.56	561.84	14.28
13	14	593.19	608.66	15.47
14	7	638.82	655.48	16.66
15	8	684.45	702.30	17.85
16	3	730.08	749.12	19.04
17	1	775.71	795.94	20.23
21	3	958.23	983.22	24.99

Category 4 - Day hired electric boats

Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
7	5	222.81	228.62	5.81
9	2	286.47	293.94	7.47
10	13	318.30	326.60	8.30
11	13	350.13	359.26	9.13
12	6	381.96	391.92	9.96
14	4	445.62	457.24	11.62
15	6	477.45	489.90	12.45

Category 5 - MCA passenger boats and small passenger boats

Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
5	1	196.25	201.35	5.10
8	2	314.00	322.16	8.16
9	1	353.25	362.43	9.18
18	1	706.50	724.86	18.36
19	1	745.75	765.13	19.38
23	1	902.75	926.21	23.46
72	2	2826.00	2899.44	73.44
84	1	3297.00	3382.68	85.68
89	2	3493.25	3584.03	90.78
98	1	3846.50	3946.46	99.96

Category 6 – Motorised Sailing craft for hire				
Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
13	1	314.73	322.92	8.19
15	1	363.15	372.60	9.45
16	3	387.36	397.44	10.08
17	1	411.57	422.28	10.71
18	3	435.78	447.12	11.34
21	5	508.41	521.64	13.23
22	2	532.62	546.48	13.86
23	4	556.83	571.32	14.49
24	3	581.04	596.16	15.12
25	9	605.25	621.00	15.75
26	8	629.46	645.84	16.38
29	1	702.09	720.36	18.27
30	2	726.30	745.20	18.90
34	1	823.14	844.56	21.42
35	2	847.35	869.40	22.05

Category 7 - Sailing boats for hire				
Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
5	62	90.15	92.50	2.35
7	1	126.21	129.50	3.29
8	1	144.24	148.00	3.76
10	4	180.30	185.00	4.70
11	11	198.33	203.50	5.17
12	1	216.36	222.00	5.64
14	2	252.42	259.00	6.58
16	10	288.48	296.00	7.52
22	3	396.66	407.00	10.34

Category 8 - Houseboats for hire				
Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
22	1	338.80	347.60	8.80
23	2	354.20	363.40	9.20
24	1	369.60	379.20	9.60
28	2	431.20	442.40	11.20
29	2	446.60	458.20	11.60
31	1	477.40	489.80	12.40
34	1	523.60	537.20	13.60
35	2	539.00	553.00	14.00
36	5	554.40	568.80	14.40
39	3	600.60	616.20	15.60
40	1	616.00	632.00	16.00
41	1	631.40	647.80	16.40
43	4	662.20	679.40	17.20

Category 9 - Rowing boats, canoes etc. for hire				
Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
All	194	67.68	69.44	1.76

Category 10 - Private motor boats				
Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
5	721	66.20	67.95	1.75
6	232	79.44	81.54	2.10
7	173	92.68	95.13	2.45
8	148	105.92	108.72	2.80
9	147	119.16	122.31	3.15
10	184	132.40	135.90	3.50
11	247	145.64	149.49	3.85
12	255	158.88	163.08	4.20
13	155	172.12	176.67	4.55

Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
14	196	185.36	190.26	4.90
15	256	198.60	203.85	5.25
16	219	211.84	217.44	5.60
17	118	225.08	231.03	5.95
18	147	238.32	244.62	6.30
19	111	251.56	258.21	6.65
20	136	264.80	271.80	7.00
21	191	278.04	285.39	7.35
22	336	291.28	298.98	7.70
23	253	304.52	312.57	8.05
24	93	317.76	326.16	8.40
25	89	331.00	339.75	8.75
26	95	344.24	353.34	9.10
27	116	357.48	366.93	9.45
28	183	370.72	380.52	9.80
29	129	383.96	394.11	10.15
30	109	397.20	407.70	10.50
31	81	410.44	421.29	10.85
32	62	423.68	434.88	11.20
33	110	436.92	448.47	11.55
34	105	450.16	462.06	11.90
35	108	463.40	475.65	12.25
36	60	476.64	489.24	12.60
37	89	489.88	502.83	12.95
38	108	503.12	516.42	13.30
39	74	516.36	530.01	13.65
40	68	529.60	543.60	14.00
41	88	542.84	557.19	14.35
42	65	556.08	570.78	14.70
43	39	569.32	584.37	15.05
44	24	582.56	597.96	15.40
45	14	595.80	611.55	15.75
46	60	609.04	625.14	16.10
47	26	622.28	638.73	16.45
48	24	635.52	652.32	16.80
49	24	648.76	665.91	17.15
50	11	662.00	679.50	17.50
51	8	675.24	693.09	17.85
52	16	688.48	706.68	18.20
53	5	701.72	720.27	18.55
54	13	714.96	733.86	18.90
55	10	728.20	747.45	19.25

Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
56	1	741.44	761.04	19.60
57	3	754.68	774.63	19.95
59	2	781.16	801.81	20.65
60	5	794.40	815.40	21.00
62	5	820.88	842.58	21.70
63	4	834.12	856.17	22.05
64	3	847.36	869.76	22.40
66	1	873.84	896.94	23.10
67	1	887.08	910.53	23.45
69	2	913.56	937.71	24.15
70	2	926.80	951.30	24.50
72	1	953.28	978.48	25.20
73	1	966.52	992.07	25.55
76	1	1006.24	1032.84	26.60
77	1	1019.48	1046.43	26.95
79	1	1045.96	1073.61	27.65
80	1	1059.20	1087.20	28.00
86	2	1138.64	1168.74	30.10
94	1	1244.56	1277.46	32.90
105	1	1390.20	1426.95	36.75

Category 11 - Electric private motor boats				
Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
5	162	51.50	52.85	1.35
6	15	61.80	63.42	1.62
7	12	72.10	73.99	1.89
8	8	82.40	84.56	2.16
9	12	92.70	95.13	2.43
10	4	103.00	105.70	2.70
11	8	113.30	116.27	2.97
12	4	123.60	126.84	3.24
13	5	133.90	137.41	3.51
14	2	144.20	147.98	3.78
15	3	154.50	158.55	4.05
16	2	164.80	169.12	4.32
17	1	175.10	179.69	4.59
18	1	185.40	190.26	4.86

Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
19	1	195.70	200.83	5.13
21	1	216.30	221.97	5.67
22	5	226.60	232.54	5.94
27	1	278.10	285.39	7.29
28	1	288.40	295.96	7.56
30	1	309.00	317.10	8.10

Category 12 - Motorised sailing craft				
Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
6	18	58.74	60.30	1.56
7	25	68.53	70.35	1.82
8	60	78.32	80.40	2.08
9	28	88.11	90.45	2.34
10	77	97.90	100.50	2.60
11	108	107.69	110.55	2.86
12	104	117.48	120.60	3.12
13	64	127.27	130.65	3.38
14	72	137.06	140.70	3.64
15	62	146.85	150.75	3.90
16	68	156.64	160.80	4.16
17	107	166.43	170.85	4.42
18	62	176.22	180.90	4.68
19	21	186.01	190.95	4.94
20	65	195.80	201.00	5.20
21	41	205.59	211.05	5.46
22	25	215.38	221.10	5.72
23	17	225.17	231.15	5.98
24	6	234.96	241.20	6.24
25	18	244.75	251.25	6.50
26	14	254.54	261.30	6.76
27	6	264.33	271.35	7.02
28	8	274.12	281.40	7.28
29	3	283.91	291.45	7.54
30	2	293.70	301.50	7.80
31	2	303.49	311.55	8.06
37	2	362.23	371.85	9.62
39	1	381.81	391.95	10.14

Category 13 - Private sailing craft				
Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
5	504	41.20	42.30	1.10
6	97	49.44	50.76	1.32
7	61	57.68	59.22	1.54
8	105	65.92	67.68	1.76
9	29	74.16	76.14	1.98
10	42	82.40	84.60	2.20
11	143	90.64	93.06	2.42
12	37	98.88	101.52	2.64
13	5	107.12	109.98	2.86
14	15	115.36	118.44	3.08
15	3	123.60	126.90	3.30
16	4	131.84	135.36	3.52
17	4	140.08	143.82	3.74
18	2	148.32	152.28	3.96
19	1	156.56	160.74	4.18
21	2	173.04	177.66	4.62
23	1	189.52	194.58	5.06
27	2	222.48	228.42	5.94
30	1	247.20	253.80	6.60
31	1	255.44	262.26	6.82
32	1	263.68	270.72	7.04
33	2	271.92	279.18	7.26
34	1	280.16	287.64	7.48
38	2	313.12	321.48	8.36
40	1	329.60	338.40	8.80
45	1	370.80	380.70	9.90
46	1	379.04	389.16	10.12

Category 14 - Private houseboats				
Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
11	2	58.41	59.95	1.54
13	1	69.03	70.85	1.82
17	4	90.27	92.65	2.38
18	1	95.58	98.10	2.52
19	2	100.89	103.55	2.66

Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
20	2	106.20	109.00	2.80
24	1	127.44	130.80	3.36
25	1	132.75	136.25	3.50
26	1	138.06	141.70	3.64
27	1	143.37	147.15	3.78
29	1	153.99	158.05	4.06
31	1	164.61	168.95	4.34
33	3	175.23	179.85	4.62
35	2	185.85	190.75	4.90
36	2	191.16	196.20	5.04
38	2	201.78	207.10	5.32
40	1	212.40	218.00	5.60
41	1	217.71	223.45	5.74
42	1	223.02	228.90	5.88
43	2	228.33	234.35	6.02
44	1	233.64	239.80	6.16
45	1	238.95	245.25	6.30
46	1	244.26	250.70	6.44
48	2	254.88	261.60	6.72
49	2	260.19	267.05	6.86
50	1	265.50	272.50	7.00
61	1	323.91	332.45	8.54
62	1	329.22	337.90	8.68
75	1	398.25	408.75	10.50
104	1	552.24	566.80	14.56
110	1	584.10	599.50	15.40
176	1	934.56	959.20	24.64

Category 15 - Private rowing boats, canoes etc.				
Size in Meter ²	Number of craft (30 Sep 2018)	Toll 2018/19 £	+2.6% Toll 2019/20	Difference in cash (£) terms
All	1477	33.84	34.72	0.88

Water Ski Permit - amendment to conditions
Report by Head of Safety Management

Purpose: This report seeks the views of the Committee on a change in the policy as regards the necessity to undertake a Wash and Noise test as part of the Water Ski Permit conditions.

A draft of the amended permit conditions is set out in Appendix 1.

1. Background

- 1.1. The Authority developed a set of permit conditions for water skiing and wakeboarding in 2010 following concern over safety and that water ski tow boats and specifically boats used for towing wakeboarders who generated wash in excess of that specified in the Broads Authority Byelaws.
- 1.2. The current permit conditions requires all boats to complete a wash and noise test to determine whether the boat named on the permit produces excess wash and noise when in normal use.

2. Wash and Noise Test

- 2.1. To complete the test, various equipment is set up bankside and the vessels have to pass the test station at two speeds making a passage downstream and then upstream. Noise levels and wash heights are recorded.
- 2.2. The documented test procedure sets out the criteria derived from the Broads Authority Navigation Byelaws, the British Water Ski and Wakeboard environmental standards. A large number of water ski boats have completed the test and to date none have failed to meet the pass criteria.
- 2.3. It has been observed that there has been little variance in generated wash and noise during the tests by the range of water ski tow boats as the design, dimensions and engine size are very similar due to the nature of the use.

3. Proposals

- 3.1. As the boats have not demonstrated large variations or failed to meet the pass criteria and given the burden on the boat owner, the water ski club and the Authority to organise and carry out the tests it is proposed to remove the need to complete a wash and noise test from the permit conditions.
- 3.2. It is proposed that the change will be effective from 1st April 2019.

3.3. It is also proposed that if the Authority receives complaints regarding untested boats that a wash and noise test could be carried out as part of the investigation into the complaint.

4. Boat Safety Management Group

4.1. The Boat Safety Management Group was consulted at its meeting on 1st October 2018. The members were content with the proposals however they did suggest that where a new type of vessel was registered, a make and model that had not previously been used on the Broads as a Water Ski tow boat, the Authority should reserve the right to insist on a wash and noise test being carried out.

Background papers: None

Author: Steve Birtles
Date of report: 21 September 2018

Appendices: Appendix 1 - Draft Water Ski Permit conditions.



BROADS AUTHORITY

Water Skiing and Wake Boarding Permit

This Permit is issued under Section 27 of the Broads Authority Act 2009.

The Broads Authority hereby permits

_____ to navigate the Authorised Vessel

for the purpose of towing a water skier (or wake boarder) in the zones and at the times specified in Appendix 1 to this Permit provided this is in accordance with the conditions specified below.

This Permit is issued on the basis that

- a) the Authorised Vessel has a block area of no more than 13 square metres, has a planing hull, and does not have permanent covered accommodation.
- b) the Authorised Vessel has been registered in accordance with the Authority's Byelaws and that payment of the Prescribed Annual Toll for the vessel has been made.

In this Permit the following definitions apply:-

The "2009 Act" means the Broads Authority Act 2009

"Authorised Vessel" means the vessel described in Part 1 of the Schedule

"Authorised Person" means the persons named in Part 2 of the Schedule

The "Authority" means the Broads Authority

The "Permit Holder" means the person named above

The "Prescribed Annual Toll" means the appropriate annual toll within a scale of tolls, currently in force in any year, as prescribed by the Authority pursuant to Section 26 of the Harbours Act 1964

"Kill Cord" means a device to automatically stop the engine of the Authorised Vessel if the person navigating the Vessel leaves the helm

"Air Chair" means a board or chair with an integral hydrofoil for the purpose of lifting the rider and board or chair above the surface of the water

"Bank Start" means where a skier is pulled from a bank or platform by a water ski vessel to start the water skiing activity.

"Boom" a device which extends over the edge of a vessel for the purpose of providing physical support during training and for barefooting.

"Inflatable" means an object that can be inflated with gas or air.

“Jumping” means being towed by a boat and using a ramp to leave the surface of the water.

“Parascending” means being towed behind a vessel while attached to a specially designed parachute, known as a parasail.

“Kneeboard” means a buoyant board ridden in a kneeling stance that is used to ride on water whilst being towed behind a boat.

“Wakeboard” means a device where the feet are bound to a device at an acute angle to the parallel that is designed to travel on the wake created by the towing vessel,

“Water Ski” means a ski-like board used in pairs, or a mono ski, where the feet are bound in-line with the parallel that is designed to ride on water whilst being towed behind a boat.

THE CONDITIONS

1. This Permit runs from _____ to ~~31 March 2013~~ unless cancelled earlier by the Authority under Condition 23 of this Permit.
2. This Permit is personal to the Permit Holder and is not transferrable.
3. (a) This Permit does not permit anyone other than the Permit Holder and the Authorised Persons to navigate the Authorised Vessel.

(b) Condition 3(a) does not apply in respect of training for the British Water Ski ski-boat driver award that can be undertaken for a maximum of 3 months in the period covered by this Permit. The Permit Holder or Authorised Person must be on board the Authorised Vessel and is considered master of the vessel at all times during the period of training.
4. a) This Permit authorises the Permit Holder and the Authorised Persons to navigate the Authorised Vessel at a speed over the ground greater than specified in the Broads Authority Speed Limit Byelaws 1992 Schedule 1 while being used for the purpose of "towing a water skier" in the zones and at the times specified in Appendix 1 to this Permit

b) For this purpose, "towing a water skier" shall be deemed to include the act of recovering a water skier who has been separated from the vessel during towing.
5. The Permit Holder and any Authorised Person must:-
 - (a) Throughout the period of this Permit each maintain a policy of insurance in respect of any liability referred to in paragraph 2 of Schedule 3 to the 2009 Act in the sum of £2,000,000.
 - (b) On written request from an Officer of the Authority to do so produce to the Authority evidence of the insurance cover referred to in Condition 5 (a).
6. (a) The Permit Holder and any Authorised Person and any person under training must throughout the period of this Permit:-
 - (i) Each be a member of both the Eastern Rivers Ski Club and the British Water Ski & Wakeboard
 - (ii) Except where Permit Condition 6 (b) applies, only tow water skiers or wake boarders who are members of such clubs.
(b) Condition 6 (a) (ii) does not apply in respect of water skiers and wake boarders who are towed up to a maximum of 4 occasions in the period covered by this Permit.

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7. The Permit Holder and any Authorised Person must throughout the period of this Permit each hold a current British Water Ski Boat Driver Award or qualification approved by the Authority following consultation with the British Water Ski and Wakeboard.
8. (a) Whilst in use for the purpose of water skiing or wake boarding the Authorised Vessel must display in the approved position a set of registration marks at a minimum height of 225mm (9 inches) and of a type, colour and material approved by the Authority.
- (b) For this purpose, "approved position" means on each side of the bow and at the after end of the vessel so as to be visible from astern.
9. The Authorised Vessel must not be used pursuant to this Permit if, following its issue, either:-
- (a) A material change is made to it or to its systems which in either case may affect the generation of wash or noise from the vessel, unless that change has been approved by The Authority; or
- (b) A change is made to the vessel that either increases its block area to more than 13 square metres or involves the provision of a non-planning hull or permanent covered accommodation.
- ~~10. The Authorised Vessel must have completed and passed a Wash and Noise Test of a type approved by the Authority and complying with the pass criteria set out in Appendix 3 to this Permit.~~
104. (a) The Authorised Vessel must be subjected to an annual test (which complies with the methodology set out in Appendix 4.3 of this Permit) carried out by a person approved by the Authority which verifies that:
- (i) The steering system of the vessel is in good condition and fit for purpose and,
- (ii) The Kill Cord functions correctly.
- (b) The Permit Holder must produce to the Authority on request details of the test carried out under condition 4.10(a).
- ~~4.211~~ 11. The Permit Holder and any Authorised Person must use "approved equipment" only
- a) For this purpose, "approved equipment" shall be limited to
- i. The Authorised Vessel
 - ii. Tow Rope;
 - iii. Knee Board
 - iv. Wake Board
 - v. Skis
 - vi. Boom
- ~~4.312~~ 12. The Permit Holder and any Authorised Person must not permit the use of ballast or excessive weight in the vessel or carry passengers in excess of the manufacturer's recommendations.

- | 134. The Permit Holder and any Authorised Person must not permit the use of “air chairs”, and any “inflatable”.
- | 145. The Permit Holder and any Authorised Person must not cause an Authorised Vessel to make any sustained wave, against a bank, of more than 300 mm (12 inches) in height from trough to crest.
- | 156. (a) The Permit Holder must:-
 - (i) Maintain and keep up to date a log book issued by the Authority in respect of the use by the Permit Holder and any Authorised Person of the Authorised Vessel under this Permit.
 - (ii) Keep the log book on the Authorised Vessel whilst being used by the Permit Holder and any Authorised Person under this Permit.
 - (iii) Produce the log book on request to any officer of the Authority.
 - (iv) Return the log book to the Authority at the end of the period covered by this Permit or upon its cancellation if earlier.
- (b) Any Authorised Person whilst operating the Authorised Vessel under this Permit must produce the log book on request to any officer of the Authority.
- | 167. The Permit Holder and any Authorised Person must navigate the Authorised Vessel with care and caution.
- | 178. The Permit Holder and any Authorised Person must not navigate the Authorised Vessel unless there is also on board at least one person to provide assistance during towing.
- | 189. The Permit Holder and any Authorised Person must not at any time navigate the Authorised Vessel so as to tow more than 2 persons.
- | 1920. The Permit Holder and any Authorised Person must ensure that any water skier or wake boarder being towed does not engage in parascending, ski jumping, or bank starts.
- | 204. The Permit Holder and any Authorised Person must:-
 - (a) Use tow-ropes of equal length when towing two water skiers; and
 - (b) Ensure that two water skiers do not cross in front of, or behind, each other; and
 - (c) Not navigate the Authorised Vessel without attaching the Kill Cord to their person in a way which ensures that it will operate effectively.
- | 212. a) The Permit Holder and any Authorised Person must ensure that any water skier or wake boarder being towed remains in or on the water at all times during towing.
- b) Condition 212 (a) does not apply in respect of water skiers and wake boarders provided that all of the conditions 212 b) i),ii,iii), and iv) are complied with.

- i) Water skiing and wake boarding shall be limited to zones and times set out in Appendix 2.
- ii) No more than six concurrent Authorised Vessels are used at any one time in any one zone set out in Appendix 2.
- iii) The Permit holder and any Authorised Persons shall register with the Authority on each occasion their intention to navigate the Authorised Vessel.
- iv) The Permit Holder and any Authorised Person must not at any time navigate the Authorised Vessel so as to tow more than 1 person.

23. The Authority may cancel this Permit, or amend its conditions, if:-

- (a) The Permit Holder or any Authorised Person is convicted of an offence under Section 29 of the 2009 Act; or under any byelaw made by the Authority; or
- (b) Condition 5 of this Permit has not been observed.

The Schedule

Part 1

The Authorised vessel to which this Permit applies is as follows¹:

Part 2

The Authorised Person/s to which this Permit applies is/are as follows²:

1	Permit Holder
2	Authorised Person
3	Authorised Person
4	Authorised Person

Appendices

- 1 Water Ski and Wake Boarding Zones and Times
- 2 Water Ski and Wake Boarding Zones and Times applicable to the Wake Boarding Trial 2012/13
- ~~3 Wash and Noise Test Pass Criteria~~
- ~~34~~ Annual Steering and Kill Cord Test Methodology

¹ This information should be added by the Broads Authority only.

² This information should be added by the Broads Authority only. Additions may also only be made by the Broads Authority.

PMSC Aids to Navigation – Trinity House
Report by Head of Safety Management

Purpose: This report provides the Committee with information on the work the Authority has undertaken to identify and rectify deficient Aids to Navigation (AtoN) following the Trinity House annual report 2017, see Appendix 1.

1. Background

- 1.1. The Port Marine Safety Code requires all Aids to Navigation (AtoN) maintained by Harbour Authorities and any other existing Local Lighthouse Authorities to be maintained in accordance with the criteria laid down by the General Lighthouse Authority (GLA), and must be subject to periodic review.
- 1.2. The characteristics of these AtoN must comply with guidelines and recommendations as laid down by the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA). The GLA require Harbour Authorities and any other existing Local Lighthouse Authorities to be responsible for ensuring that any third party AtoN, within their area of responsibility, are also established and maintained to the same standards.
- 1.3. Trinity House (the GLA) carries out annual inspections of AtoN's for each Harbour Authority in the UK.

2. The Broads Aids to Navigation (AtoN)

- 2.1. The Broads has 230 Aids to Navigation on the Broads system which is the second highest count for any harbour authority in the UK only the Port of London having more. Aids to Navigation range from channel marker posts, lights on fixed structures such as bridges and piers, to signage at cable and gas crossing points.
- 2.2. Whilst the Channel Markers are directly controlled by the Broads Authority many of the other AtoN's are the responsibility of third parties such as utility companies, Network Rail and the Highways Agency. However the overall responsibility for the management of all AtoNs within the Broads lies with the Broads Authority.
- 2.3. Over the years the management of the third party AtoN's has proved extremely difficult with some utility companies not responding to letters and contacts from the Authority asking them to maintain their AtoN's which protect their assets.

- 2.4. The Trinity House Annual report, see Appendix 1, lists the Broads Authority as a poor performer primarily for the amount of third party AtoN's which are deficient in some way.

3. Progress

- 3.1. In 2016 following the annual Trinity House inspection in which faults were recorded because some AtoN's just could not be found the Authority committed time and effort to planning and locating these "missing" AtoN's. This resulted in an increase of deficient AtoN's in the following annual inspection as more were identified.
- 3.2. Following a concerted effort to contact the third party owners of the AtoN's and the maintenance programme of replacing and maintaining the Authority owned AtoN's the position following the 2018 inspection is much improved with only 26.9% of deficiency which are all third party owned assets.
- 3.3. The Authority has also mapped onto its graphical information system (GIS) the location of all of the river furniture, signs, channel marker posts etc. including the formal AtoN's which will allow Rangers to regularly inspect and report on the condition of these assets.

4. Next steps

- 4.1. A large number of the defective items on the current list can be rectified by rationalising the signage which is planned for 2018/19 which will result in a further reduction of defective items on the annual inspection.

Background papers: None

Author: Steve Birtles
Date of report: 10 October 2018

Appendices: Appendix 1 – Trinity House Annual Report 2017



TRINITY HOUSE

INSPECTIONS/AUDITS OF LOCAL AIDS TO NAVIGATION AND OFFSHORE STRUCTURES

2017 REPORT



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Cover picture: Kings Lynn, Roaring Middle Light Float

Executive summary

- The deficiency rate continues to trend downwards, 10008 local authority AtoN were inspected, with a reported deficiency rate of 10.68% which is down 1.65% on the previous year. Section 3.2 refers.
- The consistent poor performing authorities have been heavily targeted and the numbers are reducing; there are however still a few authorities – primarily non Competent Harbour Authorities (CHAs) – which continue to rank as persistent poor performers as detailed in Section 3.2.6. These Authorities will be targeted during the inspection and audit regime of 2018.
- CHA deficiency rates have decreased further in 2017 by 1.41% which corresponds to a relatively consistent defect rate over the previous three years – around 10%. Other AtoN providers are also showing a continued downward trend in deficiencies, falling this year to 12.5%. The highest defect remains ‘requiring painting’ at 25%, but of particular concern is the number of lights extinguished which has increased this year and represents 20% of total AtoN deficiencies. Section 3.2.8 refers.
- The Offshore Renewable Energy Installations (OREI) sector continues to grow and was again inspected in full, with a slight increase in deficiency rate to 10.91%.
- Oil and Gas has seen a slight increase in total defects observed but a marked improvement noted overall, with those platforms with major defects reduced to a single platform. This relates to the close liaison with the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED), resulting in a greatly improved co-operation from the platform operators. Section 4 refers.

This report is submitted to the Secretary of State pursuant to Section 198(4) of the Merchant Shipping Act, 1995.

1. Policy

- 1.1 Section 198(1) of the Merchant Shipping Act 1995 (the Act of 1995), empowers the General Lighthouse Authorities (GLAs) to inspect all lighthouses, buoys and beacons under Local Lighthouse Authority management. In addition, Section 195(1) of the Act of 1995 vests in the GLAs the superintendence and management of all lighthouses buoys and beacons within their areas.
- 1.2 Emphasis continues to be placed on a combination of inspecting local Aids to Navigation (AtoN) and auditing local AtoN provision against known (IALA) requirements.
- 1.3 Under the UK Government's Port Marine Safety Code (revised 2016) all AtoN maintained by Harbour Authorities and any other existing Local Lighthouse Authorities must be maintained in accordance with the availability criteria laid down by the GLAs, and must be subject to periodic review. The characteristics of these AtoN must comply with Guidelines and Recommendations as laid down by the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA). The GLAs require Harbour Authorities and any other existing Local Lighthouse Authorities to be responsible for ensuring that any third party AtoN, within their area of responsibility, are also established and maintained to the same standards.
- 1.4 The GLAs also require those responsible for local AtoN, which lie outside statutory Harbour and Local Lighthouse Authorities' areas of jurisdiction, e.g. AtoN established as a result of Marine and Coastal Access Act 2009, AtoN maintained by Government Agencies and the Ministry of Defence, to name but a few, to establish and maintain their AtoN to the same standards.
- 1.5 The GLAs require those responsible for local AtoN to keep appropriate records of availability statistics and failure response times, and provide to them summaries of these records.
- 1.6 In addition, each authority is required to establish procedures for responding to casualties to AtoN within the timescales as laid down and applied by the GLAs.

2. Purpose

- 2.1 The manner in which Trinity House (TH) discharges its statutory duty as a General Lighthouse Authority in respect of local AtoN is therefore a combination of consent to changes, audit and inspection. This includes the duty of superintendence and management to ensure that AtoN maintained by other authorities within TH area of responsibility meet the agreed international standards.
- 2.2 Site visits:
- Allow authorities the opportunity to discuss with the Inspecting Officer all matters relating to their AtoN provision,
 - Allow TH the opportunity to discuss, face to face, the level of local AtoN provision,
 - Enable TH to more effectively review this level of provision and recommend changes to the level and / or to the maintenance regimes, taking into account safety of navigation requirements and environmental considerations.
- 2.3 Many Local Lighthouse Authorities welcome this annual visit, as they consider the audit and inspection to form an important external audit element of their port quality management systems.
- 2.4 The Local AtoN Manager (LAM) continues to work in conjunction with the Inspector of Seamarks (IOS) thus enabling TH to both inspect all AtoN whilst also being in a position to carry out audits and follow up inspections in those areas that generate the greatest risk, taking into account the navigational significance of the authorities' AtoN. Monitoring of availability statistics also provides for an element of continuous assessment for key Authorities.

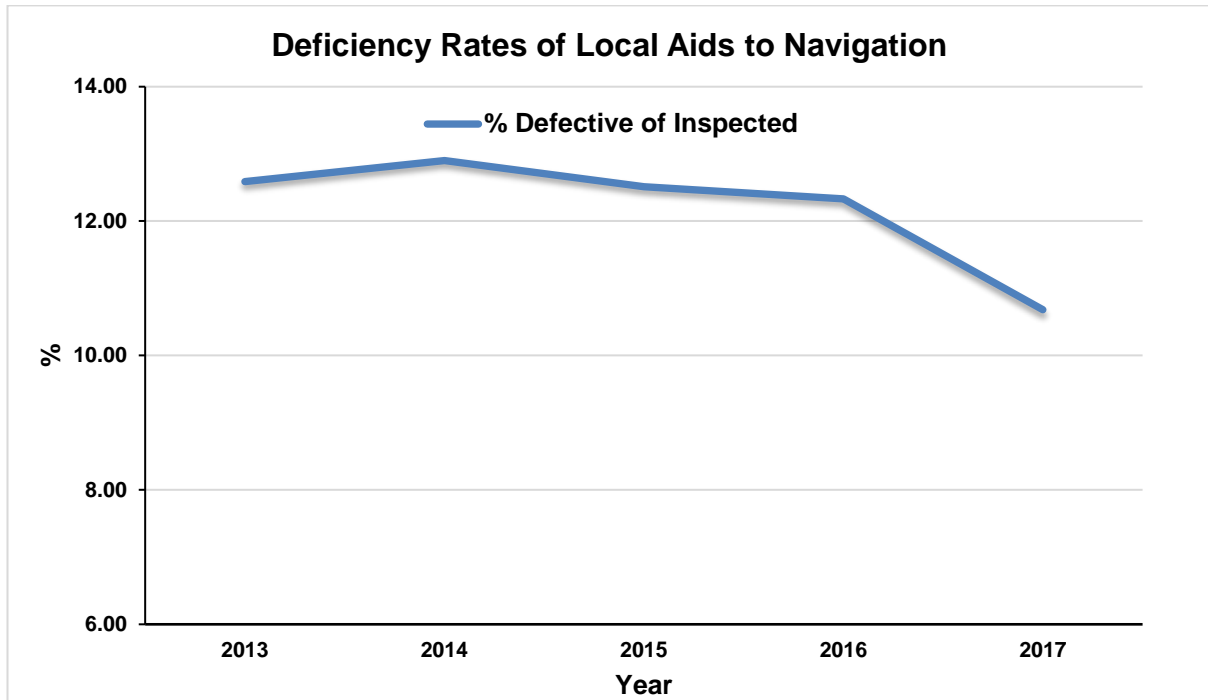
3. Local Aids to Navigation

3.1 Inspections

- 3.1.1 Inspections are arranged by direct contact with local authorities responsible for the provision of local AtoN. The authorities are invited to provide a representative to accompany the IOS during the inspection. The IOS is accompanied by a member of the Examiners Committee (responsible for deciding navigational requirements) when inspecting selected Ports and Harbours where considered necessary. Accompanied inspections for 2017 were Devonport, Portsmouth, Barrow, Thames Lower and West Coast Rigs.
- 3.1.2 Occasionally, inspections of local AtoN that can best be viewed from seaward and for which local authorities are unable to make a boat available, inspections are carried out either by the Commanding Officers of TH Tenders, or by the IOS utilising a TH launch.

3.2 Results of inspections

3.2.1 A total of **10,008** AtoN were inspected and of these **1,069** were found to be other than in good and efficient order. This represents a deficiency rate of **10.68%**, continuing the decreasing trend by a further **1.65 %** over the previous year.



3.2.2 Trinity House aspires to inspect all local AtoN annually but this is not always achieved. This year 275 of the 10283 of the active local AtoN were not inspected for practical reasons such as bad weather (including reduced visibility), provision of local boats or access. This includes a large number of seasonal AtoN which were not inspected in due to the new LAM only assuming position in June 2017.

3.2.3 The continued decrease in deficiency rates is attributed to two main points:

- 2016 reported high number of 'requiring painting' in due to poor paint preparation and products used by a number of authorities, which has been corrected.
- The strong and robust inspection and audit regime together with the established proactive use of the online reporting system has enabled targeting of key areas to be addressed.

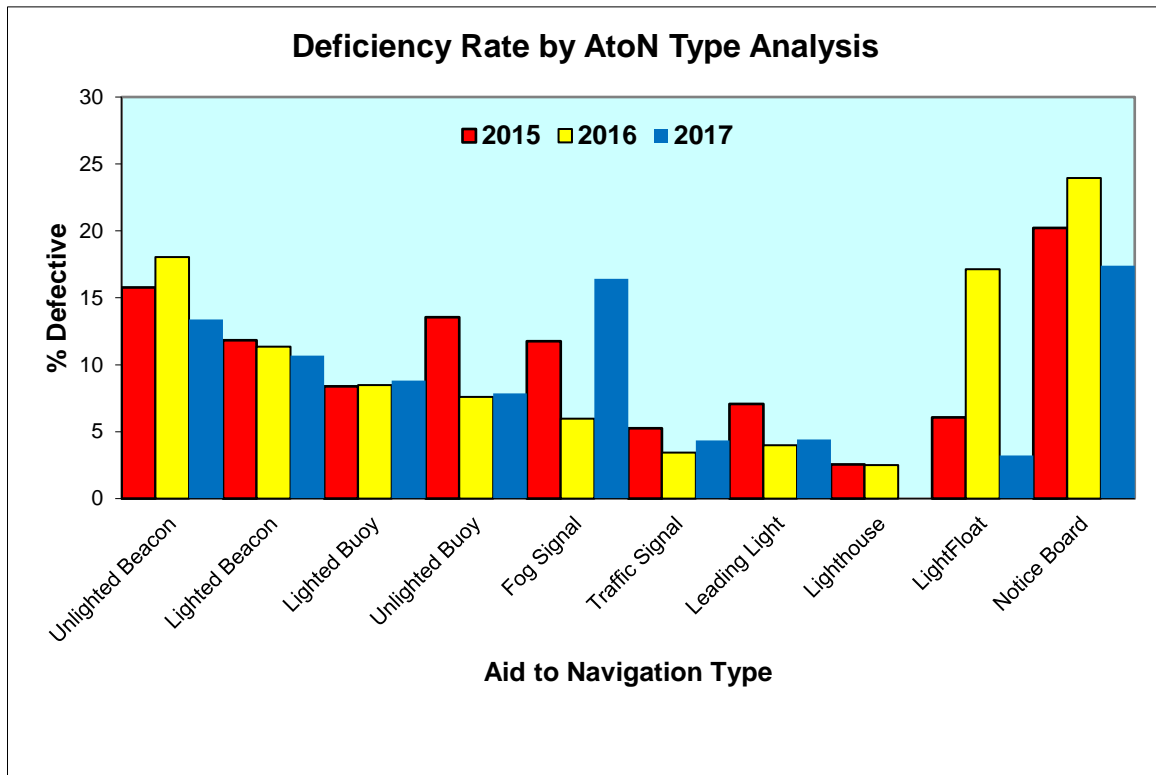
Notable AtoN providers

3.2.4 The table below details those authorities, with 10 or more AtoN, with a defect rate of $\geq 25\%$, listed from highest % defects downwards. These will be monitored and targeted during the inspection programme for 2018.

A Number	Authority	No. of AtoN Inspected	No. Defective	% Defective
A0115	British Telecom	80	40	50
A1630	Tollesbury Marina	23	11	47.83
A3005	Redcar & Cleveland Borough Council	11	5	45.45
A1200	Gosport Borough Council	10	4	40
A1210	Portsmouth City Council	15	6	40
A1875	North Norfolk District Council	46	17	36.96
A1925	Fosdyke Yacht Haven	19	7	36.84
A1855	Broads Authority	238	79	33.19
A1050	Bournemouth Borough Council	38	12	31.58
A0595	Newport City Council	11	3	27.27
A0619	Somerset County Council	11	3	27.27
A1275	Southern Water Services Limited	112	28	25

Those highlighted in red remain as poor AtoN providers from 2016; the Broads Authority however have an increased defect rate. The remaining providers show improving signs (see Section 3.2.6). New entries this year will be carefully monitored in 2018.

3.2.5 The deficiency rate by AtoN type is shown below. The significant observation this year is fog signal faults which have increased by more than 10% over the previous reporting period. This can be attributed to authorities undertaking upgrades to systems thus changes to fog signal codes, which had not been addressed to Trinity House. A detailed analysis of the defects in 2017 and of those AtoN inspected can be found at Annex 3. A listing of the Condition Codes is attached at Annex 2 and is subject to periodic review by the IOS.



Total AtoN Defective

	2015	2016	2017
Unlighted Beacon	512	584	427
Lighted Beacon	403	389	367
Lighted Buoy	133	144	145
Unlighted Buoy	151	82	82
Fog Signal	6	4	11
Traffic Signal	11	8	10
Leading Light	16	9	10
Lighthouse	1	1	0
LightFloat	2	6	1
Notice Board	19	23	14

3.2.6 The table below provides a year on year comparison of those authorities that fall into the category of having ten or more AtoN, combined with a defect rate $\geq 25\%$.

It should again be noted that authorities marked green have been found to have improved, those in amber remain within 15% of previous year, whilst only the Broads Authority has an increased defect rate and is shown in red.

A Number		2016			2017		
		AtoNs Inspected	No. Defective	% Defective	AtoNs Inspected	No. Defective	% Defective
A1506	Avant Homes	18	15	83.33	22	1	4.55
A1210	Portsmouth City Council	16	13	81.25	15	6	40
A1875	North Norfolk District Council	48	36	75	46	17	36.96
A0465	Saundersfoot Harbour Commissioners	22	15	68.18	4	0	0
A1470	Dover District Council	18	11	61.11	17	0	0
A1455	Shepway District Council	18	11	61.11	8	2	25
A3005	Redcar & Cleveland Borough Council	10	6	60	11	5	45.45
A0115	British Telecom	84	48	57.14	80	40	50
A1630	Tollesbury Marina	21	11	52.38	23	11	47.83
A1925	Fosdyke Yacht Haven	19	9	47.37	19	7	36.84
A0619	Somerset County Council	11	5	45.45	11	3	27.27
A1260	Hayling Island Sailing Club	22	9	40.91	22	5	22.73
A0843	Wales and West Utilities	17	6	35.29	17	2	11.76
A1250	Langstone Harbour Board	105	34	32.38	103	25	24.27
A0122	ABP Fleetwood	31	10	32.26	32	6	18.75
A0144	United Utilities	28	9	32.14	25	6	24
A0949	Offshore Shellfish Limited	10	3	30	12	1	8.33
A0245	Denbighshire County Council	64	19	29.69	62	13	20.97
A1855	Broads Authority	230	68	29.57	238	79	33.19
A1240	Isle of Wight Council	45	13	28.89	45	9	20
A1865	Great Yarmouth Borough Council	22	6	27.27	21	4	19.05
A1275	Southern Water Services Limited	115	31	26.96	112	28	25
A1180	ABP Southampton	311	82	26.37	311	54	17.36
A0590	Newport Harbour Commissioners	24	6	25	24	2	8.33

- **Avant Homes:** following long historical problems with this provider, pleased to report they are now fully compliant with a single AtoN fault last year
- **Portsmouth City Council:** Although some improvement has been noted there remain numerous defects. Gosport Council comes under the same controlling authority which jointly are showing an increased defect rate (see Section 3.2.4) and so they will be closely inspected during 2018.
- **North Norfolk District Council:** Groyne structures on this coast are in a very poor condition. AtoN provision will be monitored carefully in 2018 as some deterioration is expected.
- **Redcar & Cleveland Borough Council:** There is little evidence of any action to maintain AtoN. During the 2018 inspection the council will be addressed on planned maintenance requirements.
- **British Telecom:** Continue to be an ongoing concern. Changes in management with BT have seen a slight improvement and a major review of AtoN requirements is now underway. This will hopefully have a positive effect on results over the next two years.

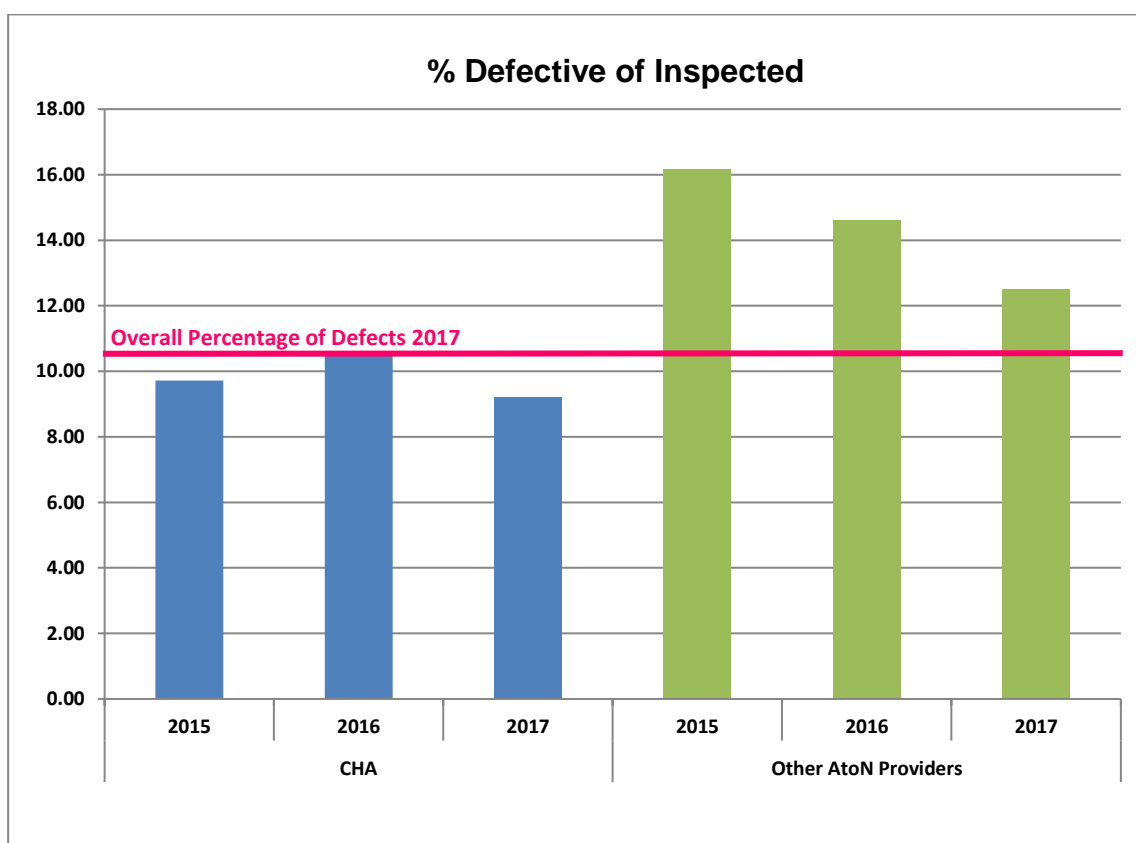
- **Tollesbury Marina:** Management changes here have seen a marked improvement in AtoN provision and maintenance; there is however still a long way to go. Detailed close up afloat inspections will be conducted in 2018. A follow up additional inspection in October 2017 indicated clear improvements in AtoN provision.
- **Broads Authority:** Continue to show a high and increasing number of defects, primarily low risk 3rd party cable crossings. Audits are planned which will include guidance on how to consolidate AtoN, working with 3rd parties to reduce deficiency rates within the authority area.

3.2.7 The following tables provide a direct comparison between Competent Harbour Authorities (CHAs) against other AtoN providers.

3.2.8 55% of the AtoN inspected are under the responsibilities of the CHAs and the deficiency rate with this group has decreased this year to 9.21% Other AtoN provider rates have also dropped this year to 12.50%.

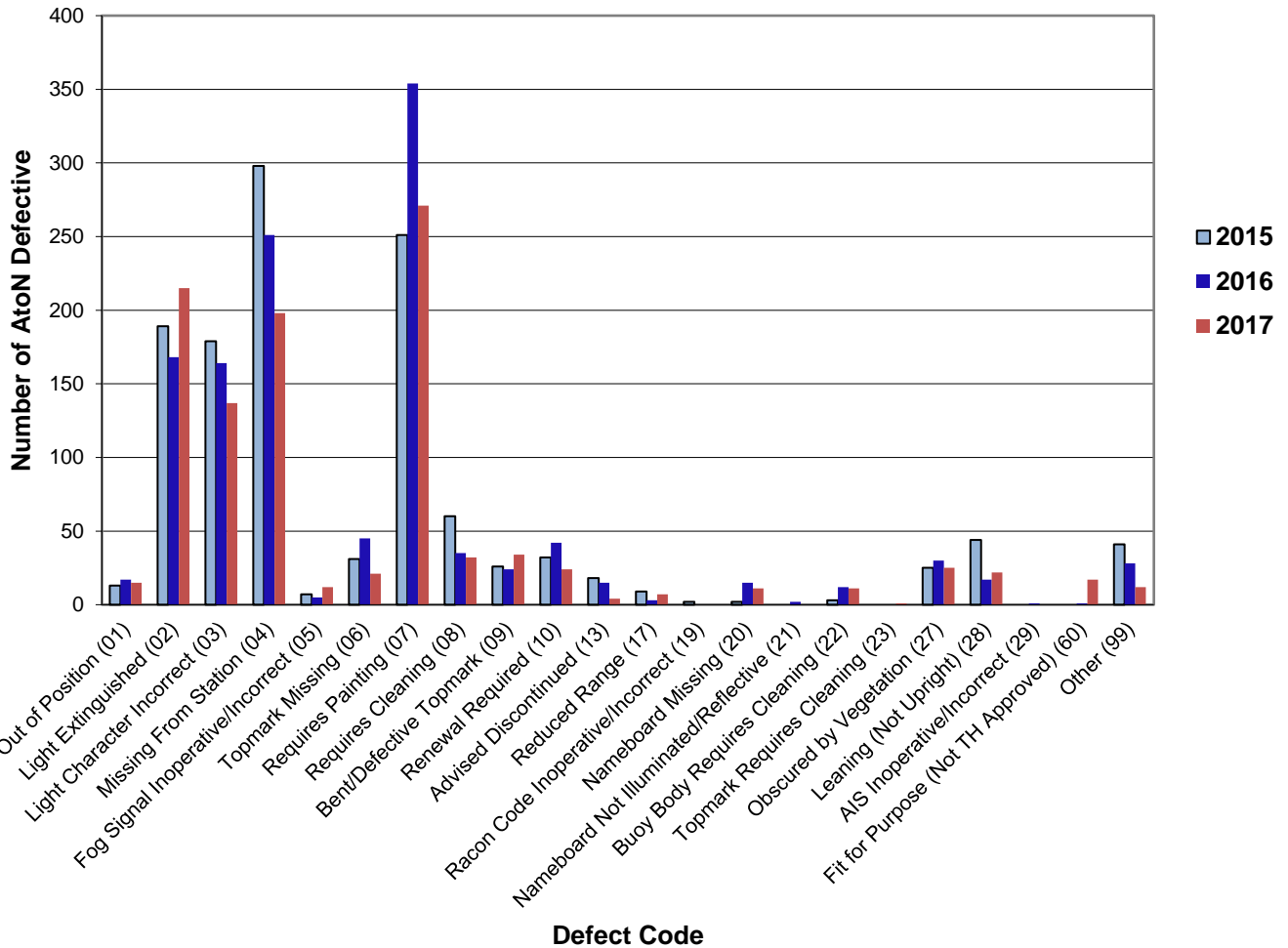
CHA Defect Analysis

	CHA			Other AtoN Providers			All AtoN Providers		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Total AtoNs Inspected	5670	5772	5529	4351	4364	4479	10021	10136	10008
Total AtoNs Defective	551	613	509	703	637	560	1254	1250	1069
% Defective of Inspected	9.72	10.62	9.21	16.16	14.60	12.50	12.51	12.33	10.68



3.2.9 The analysis below shows defects by type and notably increase in 'Light Extinguished' (02). his appears a significant increase but is primarily related to numerous small jetty lights and up river lights with 3rd party owners. Pressure will continue on authorities to address this trend. 'Requires Painting' (07) remains the highest defect code. This primarily relates to local councils and the lack of planned maintenance regimes, which are being addressed on a case by case basis.

Defect Code Analysis



***NOTE:** This table needs to be read with caution as the Y axis of this graph is elongated by the four largest defect codes, requiring careful analysis of remaining codes.

Please see **Annex 2** for description of Inspection Condition Codes and **Annex 3** for a detailed breakdown of defect results.

3.3 Audit regime

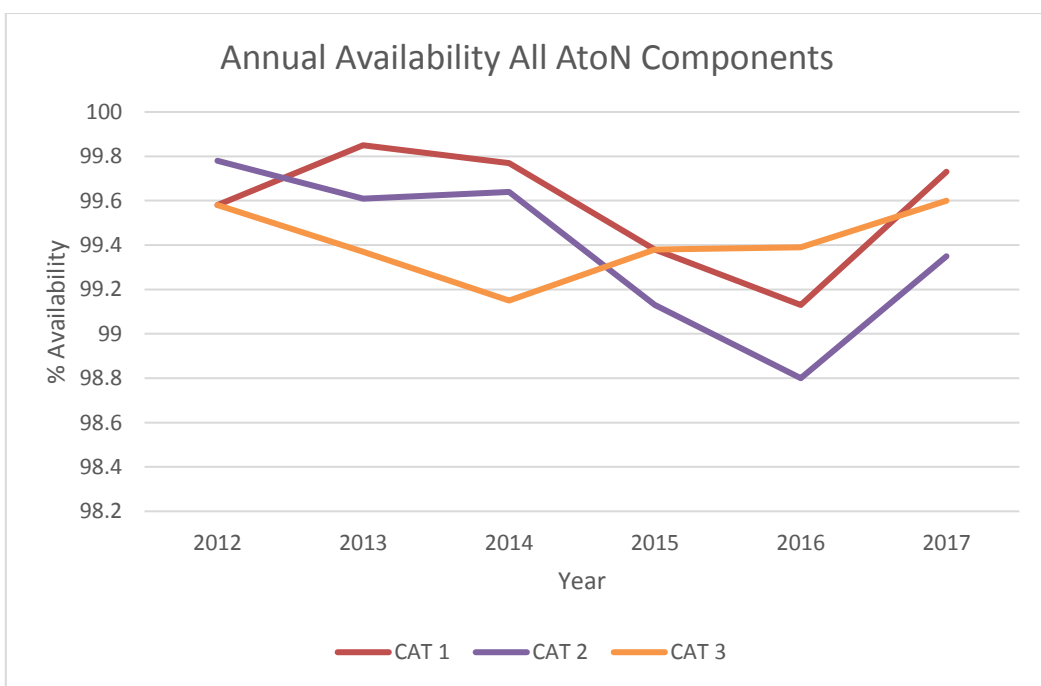
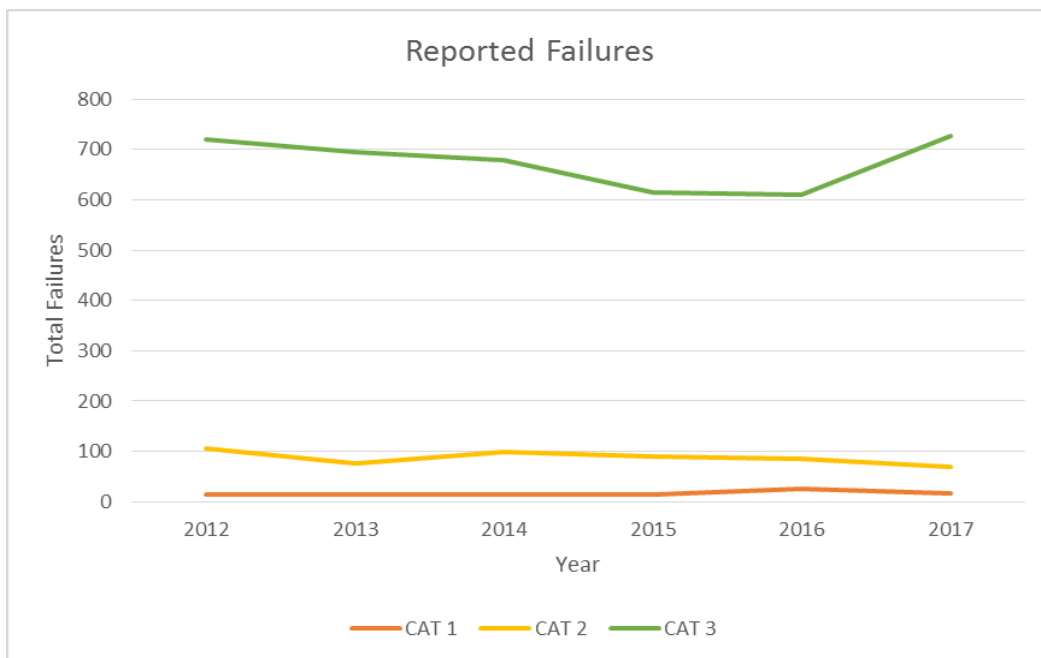
- 3.3.1 The 2017 audit programme was completed in full. There are now a total of 142 LLAs, including offshore wind farms (OWFs), that either have been, or will get, regularly audited within this figure.
- 3.3.2 A full audit programme was conducted in 2017 with a total of 64 Audits undertaken, which included 3 offshore wind farms.
- 3.3.3 No Non Conformances were issued in 2017. One Potential Improvement Notice (PIN) was issued to ABP Silloth.

3.4 Local AtoN availability

- 3.4.1 All CHAs and operational OWFs are set up to report availability, and the majority are correctly reporting with just a single instance of the old quarterly reporting routines being found to still be taking place.

3.5 Local AtoN availability returns (Online Reporting)

- 3.5.1 All audited LLAs declared familiarity and competency with the system although it was noted that some had not used the system since their account was established.
- 3.5.2 The following graphs show the total number of reported defects and the database generated availability statistics. An increase in the number of reported casualties within Category 3 is believed to be a result of greater engagement in the automated defect reporting process by the Local Lighthouse Authorities, initiated by the previous year's audit program that built on the established number and diligence of users. When compared against the increased availability of the same category, conclusions can be drawn that the duration of defects is reduced compared to previous years despite more individual instances being reported.



4. Seaward inspection of offshore structures (oil & gas)

4.1 During the 2017 seaward inspection of Offshore Structures, 144 offshore structures within TH area of responsibility were inspected. A total of 575 AtoN were inspected of which 90 were found to be defective, which represents a total defect rate of 15.65%, up from 13.64% in 2016. On a platform basis, the number with defects was 37 which is down on the figure from 2016.

	2017		2016	
TOTAL PLATFORMS INSPECTED	144		143	
TOTAL ATONS INSPECTED	575		601	
TOTAL AND % OF ATONS DEFECTIVE	90	15.65%	82	13.64%
TOTAL AND % OF PLATFORMS WITH DEFECTS	37	25.69%	54	37.76%
TOTAL AND % OF PLATFORMS WITH MULTIPLE DEFECTS	23	15.97%	13	9.09%

4.2 The defect rate for AtoNs has increased, while the number of platforms with defects has actually decreased. This apparent anomaly is reflected in the large increase in platforms with multiple defects.

4.3 Cooperation from platform operators has improved considerably, due primarily to the strong relationship in place with OPRED. Despite the increase in overall defects, it is noteworthy that those platforms with major defects were reduced in 2017 to a single platform.

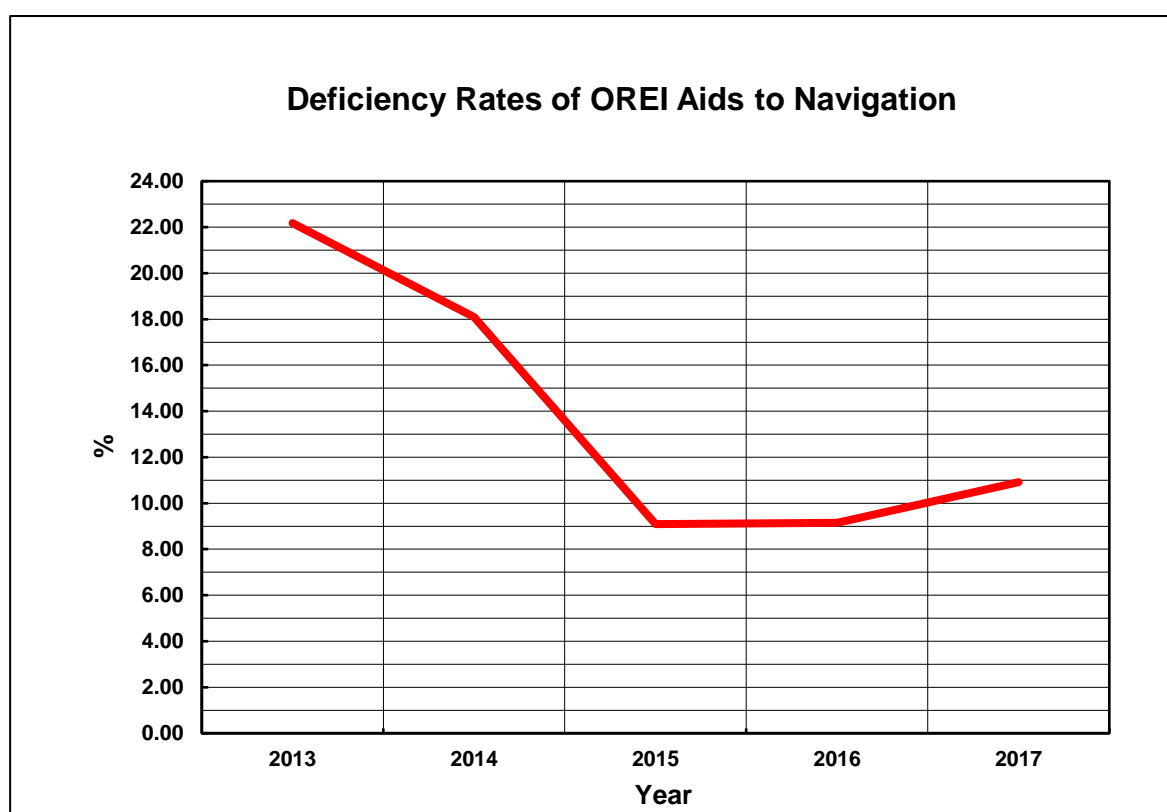
5. Offshore Renewable Energy Installations (OREI)

5.1 Inspections

There were 33 OREI sites with aids to navigation, all of which were visited in 2017. Of the 428 active aids to navigation relating to the 33 sites, 330 were inspected and 36 were found to be defective, giving a deficiency rate of 10.91%. Annex 4 details the full breakdown of inspection codes used and for what type of aid to navigation. The 2017 deficiency rate is an increase on that of 2016 (9.15%) and is largely due to aids to navigation failures on a number of Offshore Wind Farms that are over 5 years old and those on ageing Meteorological Masts.

In order to give a meaningful deficiency rate; a group of unlighted wind turbines at an OREI site are treated as one aid to navigation for reporting and inspection purposes and therefore the total of 24 unlighted wind turbines in fact represents 1367 individual unlighted wind turbine structures in reality.

The trend graph below highlights the significant progress made in this sector's AtoN provision over the last 5 years:



5.2 Inspection results by % AtoN defective

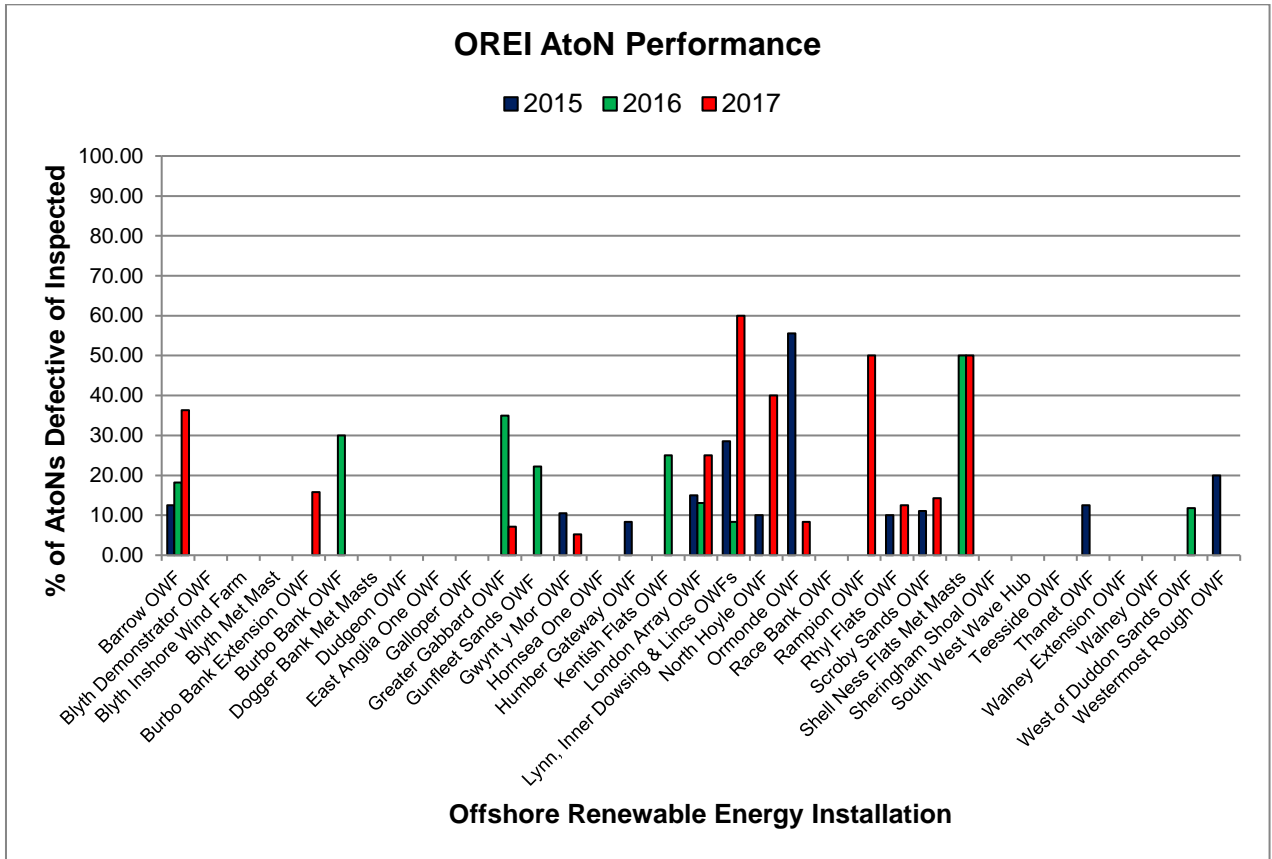
The table below details all OREI sites against their respective % of AtoNs defective. 6 of the sites below (highlighted in red) had a deficiency rate of more than 20%, which is of concern and Trinity House intend to target these sites in the 2018 inspection and audit regime.

It should be noted that the 24 Hornsea One OWF (offshore wind farm) construction phase buoys were not deployed until 31 October 2017 and therefore Trinity House was unable to schedule an inspection before the end of the year, resulting in the 0 AtoNs inspected for this site.

Inspections/Audits of Local Aids to Navigation and Offshore Structures – 2017 Report

OREI	AtoNs Inspected	No. Defective	% Defective
Barrow OWF	11	4	36.36
Blyth Demonstrator OWF	7	0	0.00
Blyth Inshore Wind Farm	2	0	0.00
Blyth Met Mast	1	0	0.00
Burbo Bank Extension OWF	19	3	15.79
Burbo Bank OWF	10	0	0.00
Dogger Bank Met Masts	2	0	0.00
Dudgeon OWF	23	0	0.00
East Anglia One OWF	2	0	0.00
Galloper OWF	13	0	0.00
Greater Gabbard OWF	14	1	7.14
Gunfleet Sands OWF	18	0	0.00
Gwynt y Mor OWF	19	1	5.26
Hornsea One OWF	0	0	0.00
Humber Gateway OWF	11	0	0.00
Kentish Flats OWF	8	0	0.00
London Array OWF	20	5	25.00
Lynn, Inner Dowsing & Lincs OWFs	15	9	60.00
North Hoyle OWF	10	4	40.00
Ormonde OWF	12	1	8.33
Race Bank OWF	8	0	0.00
Rampion OWF	10	5	50.00
Rhyl Flats OWF	8	1	12.50
Scroby Sands OWF	7	1	14.29
Shell Ness Flats Met Masts	2	1	50.00
Sheringham Shoal OWF	7	0	0.00
South West Wave Hub	6	0	0.00
Teesside OWF	4	0	0.00
Thanet OWF	3	0	0.00
Walney Extension OWF	11	0	0.00
Walney OWF	20	0	0.00
West of Duddon Sands OWF	17	0	0.00
Westermost Rough OWF	10	0	0.00

The graph below shows OREI performance at inspection, over the last 3 years. Trinity House is encouraged by the significant improvements made at 4 of the 5 sites highlighted for targeting in the 2016 report: Burbo Bank OWF, Greater Gabbard OWF, Gunfleet Sands OWF and Kentish Flats OWF; with only one defective aid to navigation found across the 4 sites.



It should be noted that the Shell Ness Flats Met Masts are programmed to be decommissioned and removed during 2018.

The significant increases in deficiency rates at the following sites are acknowledged by Trinity House and we have worked with the relevant Operators in order to resolve these issues and will continue to do so into 2018:

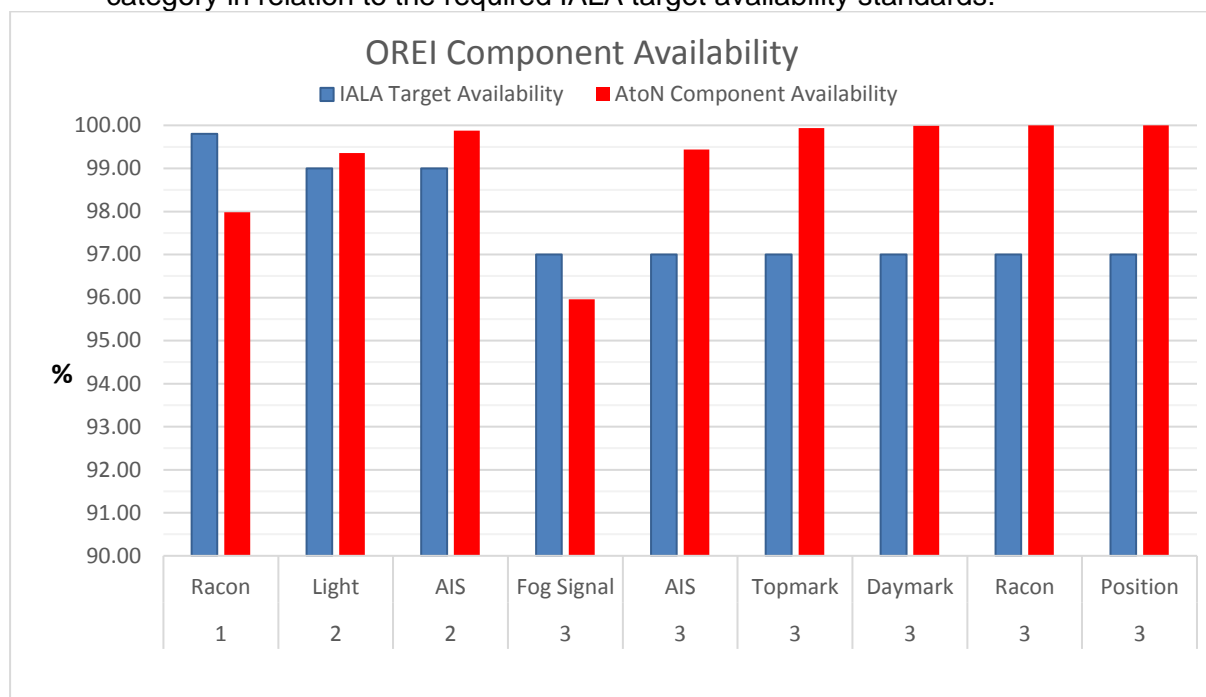
- Barrow OWF (Barrow Offshore Wind Ltd)
- London Array OWF (London Array Ltd)
- Lynn, Inner Dowsing & Lincs OWFs (Centrica Energy)
- North Hoyle OWF (Npower Renewables Ltd)
- Rampion OWF (E.ON UK)

Three of the five sites above are some of the earliest established and a number of their AtoN deficiencies are simply down to equipment reaching the end of their useful life and in need of replacement. Trinity House expect a vast improvement to their AtoN provision next year.

5.3 AtoN component availability statistics

All 33 OREI sites continued to report on their AtoN component availability and therefore we now have over two years' worth of reliable data.

The graph below shows the overall data for all AtoN components within each IALA category in relation to the required IALA target availability standards:



The above clearly shows a failure to meet the IALA target availability for both Cat 1 racon and Cat 3 fog signal components. However, as there is only one Cat 1 racon component any failure to this single component will have a significant impact on this availability percentage; which is detailed in the table. The Cat 3 fog signal failure is more concerning and relates to two offshore wind farm sites in particular, also detailed in the table below; which shows each individual OREI site that has failed to meet the IALA target availability for a particular category of components:

OREI	Category of Components	IALA Target Availability %	Availability % at 31/12/2017
East Anglia One OWF	1	99.80	97.98
Ormonde OWF	2	99.00	90.23
Shell Ness Flats Met Masts	2	99.00	91.26
East Anglia One OWF	2	99.00	97.80
Gunfleet Sands OWF	2	99.00	97.90
Thanet OWF	2	99.00	98.03
London Array OWF	3	97.00	94.23
Ormonde OWF	3	97.00	96.32

Trinity House will be monitoring the above sites closely during 2018 and engaging with the relevant authorities as appropriate, in order to achieve a more satisfactory level of availability performance from the OREI sector, both from an individual site perspective and as a whole.



Captain Roger Barker
Director of Navigational Requirements
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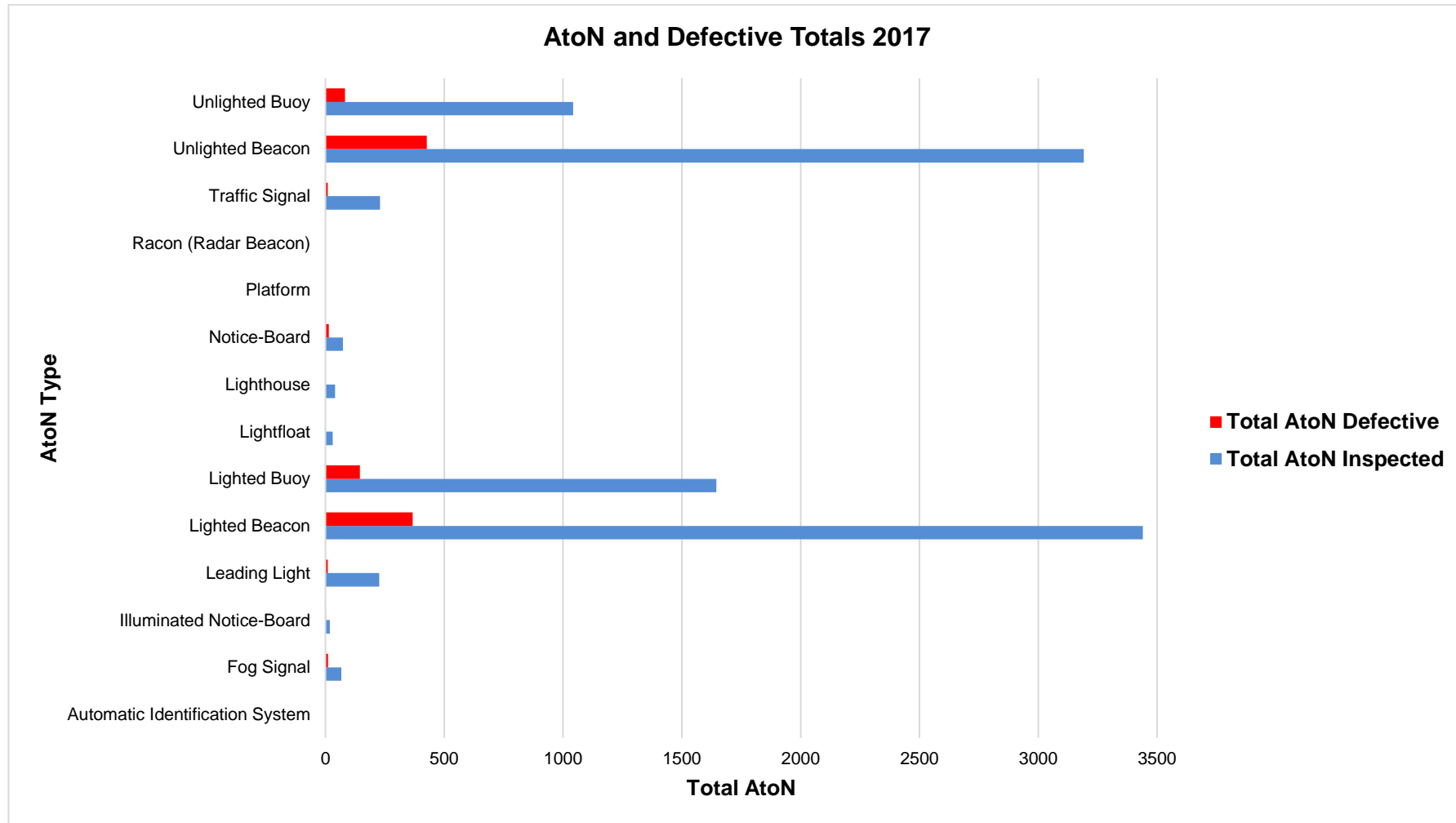
Commodore B Walworth

Captain Tony Tibbott

Navigation Directorate

Annexes

Annex 1 – AtoNs and defective totals 2017



Annex 2 – Inspection condition codes

Detailed below are the condition codes for use when reporting the results of inspections of local AtoN and Offshore Structures.

CODE	DESCRIPTION
00	Correct/Good Order
01	Out of Position
02	Light Extinguished
03	Light Character Incorrect
04	Missing from Station
05	Fog Signal Inoperative/Incorrect
06	Topmark Missing
07	Requires Painting
08	Requires Cleaning
09	Bent/Defective Topmark
10	Renewal Required
11	Light Not Seen
12	Not Seen (Not Found/Located)
13	Advised Discontinued
14	Multiple Defects – [inactive for inspection purposes but not for reporting purposes of this Report]
15	Seasonal/Occasional
16	Not Yet Established
17	Reduced Range
18	Lights Not Synchronised
19	Racon Code Incorrect
20	Nameboard Missing
21	Nameboard Not Illuminated/Reflective
22	Buoy Body Requires Cleaning
23	Topmark Requires Cleaning
24	Fog Signal Not Inspected
25	Not due for Inspection at this Time
26	Audit/Inspection Suspended
27	Obscured by Vegetation
28	Leaning (Not Upright)
29	AIS Inoperative/Incorrect
50	Good Order (Not IALA Recommended)
60	Fit for Purpose (Not TH Approved)
99	Other

Annex 3 – AtoN defect analysis

Row Labels	Automatic Identification System	Fog Signal	Illuminated Notice-Board	Leading Light	Lighted Beacon	Lighted Buoy	Lightfloat	Lighthouse	Notice-Board	Platform	Racon (Radar Beacon)	Traffic Signal	Unlighted Beacon	Unlighted Buoy	Total AtoN In
Advised Discontinued												4			4
Bent/Defective Topmark					12	2							19	1	34
Buoy Body Requires Cleaning						10								1	11
Fit for Purpose (Not TH Approved)														17	17
Fog Signal Inoperative/Incorrect		11			1										12
Fog Signal Not Inspected		19			1										20
Good Order	1	37	15	216	3005	1464	30	40	60	1	1	197	2747	879	8693
Leaning (Not Upright)													21	1	22
Light Character Incorrect				2	123	9						3			137
Light Extinguished			2	6	175	25						3		4	215
Light Not Seen					7	2									9
Missing From Station					3	14			12				128	41	198
Nameboard Missing					5	5								1	11
Not Seen (Not Found/Located)			1			14							14	12	41
Not Yet Established					17	11						2	4	11	45
Obscured by Vegetation													25		25
Other					3	7							2		12
Out of Position					7	5							2	1	15
Reduced Range				1	5	1									7
Renewal Required						3							17	4	24
Requires Cleaning					1	24	1						2	4	32
Requires Painting				1	31	38			2				192	7	271
Seasonal/Occasional					43	9						21		58	131
Topmark Missing					1	1							19		21
Topmark Requires Cleaning						1									1
Total AtoN Inspected	1	67	18	226	3440	1645	31	40	74	1	1	230	3192	1042	10008
Total AtoN Defective	0	11	2	10	367	145	1	0	14	0	0	10	427	82	1069
% Defective of Inspected	0	16.42	11.11	4.42	10.67	8.81	3.23	0	18.92	0	0	4.35	13.38	7.87	10.68

Inspections/Audits of Local Aids to Navigation and Offshore Structures – 2017 Report

Annex 4 - Offshore Renewable Energy Aids to Navigation inspection analysis

OFFSHORE RENEWABLE ENERGY AIDS TO NAVIGATION INSPECTION ANALYSIS

Aid Type	Condition Codes																													Defect Totals						
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		29	50	60	99		
Lighted Substation	2																																			0
Unlighted Substation	15																																	1	1	
Lighted Meteorological Mast	9		1	3										1																					5	
Unlighted Meteorological Mast	2																																		0	
Lighted Buoy	79				1		2																										1		4	
Lighted Wind Turbine	163		5	3		1								3			1	7																6	26	
Unlighted Wind Turbine	24																																		0	
Condition Total	294	0	6	6	1	1	2	0	0	0	0	0	0	4	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	7	36	

SUMMARY TOTALS		
No.CORRECT	No.DEFECTIVE	% DEFECTIVE
294	36	10.91%

Sediment Management Strategy Compliance
Report by Senior Waterways and Recreation Officer

Purpose: This report provides the Committee with information on the level of compliance with the waterway specifications defined in the Sediment Management Strategy based on the most recent analysis of hydrographic survey data available.

1. Background

- 1.1. The Sediment Management Strategy (SMS) was adopted by the Authority in 2007 with the aim of directing the Authority's dredging operations to achieve compliance with ideal waterway specifications defined in the SMS for various parts of the navigation area.
- 1.2. Assessment of compliance is based on an analysis of hydrographic survey data which allows for actual bed profiles to be compared with the desired profiles defined in the strategy. Initially this assessment was carried out by comparing selected cross sections of the river bed in each management unit with the appropriate specification. However, in 2014 a new method of assessing compliance was adopted with the support of the Navigation Committee. The new method compares the entire bed area of the management unit with the desired profile. This allows for a far more accurate assessment of non-compliant areas and the amount of sediment that would need to be removed to achieve compliance.
- 1.3. Additionally since 2014 the Authority has contracted hydrographic surveys which provide far more accurate detail of bed profiles and quantities of sediment in the system. These surveys also cover river margins and areas outside marked channels in more detail.
- 1.4. The new method also lets officers identify which non-compliant areas are economically dredgable. Economically dredgable sediment was defined as a non-compliant area over 300mm above the required depth in the waterway specification. Better mapping also allows for sediment to be targeted more accurately while operations are in progress. The Authority now has data covering the entire system in the new format and will resurvey the navigation area on a rolling 5 year programme to ensure accurate and up to date data is always available to inform dredging operations in the future.

2. Waterway specification compliance summary

- 2.1. Table 1 summarises the waterway specification compliance assessment comparing data from 2017 and 2018. This assessment is based on the latest available hydrographic survey data.

	Non-Compliant Volume (m ³)		Economically Dredgable Volume (m ³)		Non-compliant bed area (%)		Economically Dredgable bed area (%)	
	2017	2018	2017	2018	2017	2018	2017	2018
Ant	145,558	127,128	101,418	85,995	53%	53%	20%	20%
Bure	256,031	256,031	202,284	202,284	33%	33%	16%	16%
Chet	10,469	10,469	7,205	7,205	47%	47%	18%	18%
Thurne	421,066	406,136	268,092	256,603	81%	80%	34%	33%
Waveney	141,390	153,698	112,189	128,600	17%	16%	8%	8%
Yare	239,657	252,086	221,787	231,456	17%	18%	12%	12%
TOTAL	1,214,170	1,205,548	912,975	912,146	41%	41%	18%	18%

Table 1: Waterway specification compliance summary 2018

- 2.2 This analysis shows that there is still an estimated 1.2 million cubic metres of accumulated sediment above specification depths in the Broads waterways. Of this approximately 900,000 cubic metres is considered to be economically dredgable using the Authority's current plant and equipment.

3 Conclusions

- 3.1 Variations in quantities and location of sediment in the system have certainly been affected by the Broads Authority's dredging activities. But the changes in volumes and percentages shown in Table 1 above have also been influenced by the high quality of the data now available from the hydrographic surveys the Authority has recently commissioned. Not only is this data more accurate, having used more data points, but improvements in the way it is modelled have also given a more accurate assessment of sediment quantities.
- 3.2 This is certainly the case for the rivers Yare and Waveney where new more accurate data gives a better assessment of the amount of sediment sitting at the edge of the channel and outside channels in areas like Rockland Broad.
- 3.3 The data now available to the Authority provides a firm basis for informing future dredging operations. We are now able to compare highly accurate data with equally high quality data and this will allow for better assessment of the effectiveness of the Authority's operations on an annual basis.

Background papers:	Sediment Management Strategy 2007
Author:	Adrian Clarke
Date of report:	10 October 2018
Broads Plan Objectives:	NA1
Appendices:	None

**Construction, Maintenance and Environment Work Programme Progress
Update**

Report by Head of Construction, Maintenance & Environment

Purpose: This report informs the Committee on the progress made in the delivery of the 2018/19 Construction, Maintenance and Environment Section work programme to date.

1. Dredging and Waterways Specification

- 1.1. The detailed breakdown in Appendix 1 gives the volumes for the dredging programme to the end of September 2018. A total of 20,390 m³ of dredged sediment has been removed from the prioritised sites. This actual figure represents 51% of the programmed target of 40,000 m³ for 2018/19.
- 1.2. Dredging progress on the Lower Bure has been very good with all the major shoals on both sides of the river targeted between Runham and Marina Quays. This is the first time this whole stretch has been dredged in several decades. In Yarmouth itself, between Marina Quays and the Euro Business Park, the shoals and high spots on the true left bank have been dredged. All of this sediment was offloaded at Runham Swim via the concrete pump, for dewatering and ultimate placing next to the floodbank. This dredging crew are now working downstream on the true right bank between Marina Quays and the Euro Business Park, with this sediment heading to directly fill a setback area at Six Mile House. The concrete pump has been demobilised from the River Bure and is heading to Hickling Broad.
- 1.3. All mobilisation of plant and materials to Hickling Broad to start preparation at "Chara Bay" will occur during the first two weeks of October. The set up includes laying a 350 m silt curtain to contain the works area; excavation of a shallow trench in which to place the geotextile tubes; installing 150 five metre alder posts to hold the geotextile tubes; then laying the nine 50 metre geotextile tubes; and securing them to the posts. All of this requires heavy lifting with a long reach excavator and a variety of work platforms and boats. Once all this is installed, the concrete pump and associated pipework can be set up and dredging commence.
- 1.4. The good weather over the summer has allowed some very good progress on restoring the sites where sediment was placed next to floodbanks. This material at Stokesby and Rockland Short Dyke could only be handled once dry. This is all now reshaped and added to the overall width of these banks.

The volume of sediment is available for any future supply of topsoil-like material for crest-raising of the banks, or other strengthening works.

- 1.5. The sediment lagoons at Hickling where the previous winter's mudpumping occurred have now dried out. The Environmental Permit to allow the spreading for arable benefit has been submitted and a response from the Environment Agency is awaited. If the weather remains dry, spreading is expected in late October. If we miss this weather window, the spreading will roll to spring 2019, as agreed with the landowner.
- 1.6. Upstream of the right hand span (true right) of Breydon Bridge, the sand bar that regularly develops has been completely removed. A pontoon mounted long-reach excavator was able to dig through the compacted sediment and achieve the Waterways Specification.

2. 24 hour moorings

- 2.1. The tendering process for repiling 150 metres of the downstream end of Hoveton Viaduct moorings has been completed. Contract details are now being finalised with the preferred contractor. The specification of the work is to pile with M11 interlocking steel piling sheets and install new mooring posts and path. The working window is for nine weeks between 1st November 2018 and 28th February 2019. During this time the upstream portion of Hoveton Viaduct moorings shall remain open, but there will be no pedestrian access to or from the mooring.

3. Riverside tree management

- 3.1. The first outing of the season for Broadsword, the Broads Society group who assist the Authority in the tree management work, was held on Saturday 6th October. The site was near How Hill on the River Ant, with other work planned along the River Ant over the rest of the winter.
- 3.2. A site visit for Authority and Navigation Committee members to view the operation of the tree shears in removing riverbank tree growth has been planned. Details of the date and location have been shared. The new equipment to enable this work includes a 13 tonne excavator, sections of work pontoon and the hydraulic tree shears themselves. This first outing for the equipment and the staff using them will establish the safe system of work for the operation, the practicalities of processing and handling the cut material, and what follow up with chainsaws will be required to finish the task to specification.
- 3.3. The winter work programme for Operations Technicians, Rangers and contractors has been planned out with all landowner agreements established. The maps showing the progress on the five year plan (2017 – 2022) <http://www.broads-authority.gov.uk/looking-after/managing-land-and-water/riverside-tree-and-scrub-management> have been updated. The stretches in purple show where has been completed over the first two winter seasons. The target areas for this winter are also shown.

4. Water plant management

- 4.1. The two weedcutters have finished for the season, having been active for a total of 137 days this year. This was split between 81.5 days in the northern rivers & broads and 55.5 days in the southern rivers. 111 days were in the original plan at the start of the year, so actual figures were above the programme. Last year's total number of days spent on weedcutting was 185, indicating a lower overall rate and volume of growth this year. Water plant growth in Hickling Broad for example was lower than the previous year, so this site demanded less weedcutter time.

5. Environment & Design Team

- 5.1. Various ecological and environmental surveys have been completed in September prior to navigation works over the winter. Environment Officers have carried out otter surveys at sites for riverside tree work on the River Waveney; water vole and reptile surveys have been completed on the River Bure sediment dewatering and setback sites; sediment samples have been collected from dredge locations and analysed for contaminants prior to sediment removal; and at Hickling Broad the on-going Pymnesium algae sampling continues to keep surveillance on this issue. The findings of these surveys all help shape our delivery of projects and ensure impacts on habitats and biodiversity is avoided or minimized to acceptable levels.
- 5.2. Initial stage of planning are now underway for a major sediment re-use and habitat creation project at Peto's Marsh on the River Waveney. Working closely with Suffolk Wildlife Trust, the scheme aims to generate 20,000 m³ volume of dredged sediment over several years. Once the final design, operational timescales and ecological mitigation plans are agreed a planning consent application is to be submitted by the end of this year.
- 5.3. The Works Licence guidance document (see background papers) is in the process of being reviewed by the Rivers Engineer. The review aims to make the guidance more user-friendly and update some of the text detailing the Authority's procedures. A draft for consultation will be presented to the Navigation Committee in the new year.

Background papers: Current Works Licence guidance document http://www.broads-authority.gov.uk/data/assets/pdf_file/0018/420624/Guidance_waterways.pdf

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Appendices: APPENDIX 1 – Dredging Progress 2018/19

APPENDIX 1

Dredging Progress 2018/19 (April 2018 to end September 2018)

Project Title	Project Element	Active BA dredging weeks Completed (to end Sept / Planned)	Volume Removed m ³		Annual project Cost ^a	Actual project cost (Apr-Sept)
			Planned	Actual	Planned	Actual
Lower Bure	a) Three Mile House to Marina Quays (Apr-Aug) b) Marina Quays to Yacht Station (Sep-Nov)	24 / 32	14,000	13,280	£184,400	£220,905
<i>Runham Swim rond completed. Next re-use site is filling Six Mile House setback, starting early October</i>						
Mid Bure	a) Horning to Thurne Mouth (May-Jul) b) South Walsham Fleet dyke c) Oby to Acle Bridge (Feb-Mar 2019)	12 / 33	18,000	7,110	£190,450	£93,860
<i>Set back area at Horning Hall has been utilized to current capacity. Next setback area to fill is on the Lower Ant, with dredging in Fleet dyke</i>						
Breydon Water	Bar upstream of Breydon Bridge (March 2019)	0 / 1	500	0	£1,300	0
<i>Mechanical dredging with excavator is required. Re-prioritised to early October as an urgent safety hazard</i>						
Hickling Broad	Mudpumping marked channel in North Bay (Oct-Feb)	0 / 16	5,500	0	£148,850	£4,620
<i>CANAPE funded project. Mobilizing to site early October. All geotextile tubes and materials ordered for delivery in October</i>						
Lower Bure	Plough dredge (Jan-Mar)	Contractor	2,000	0	£9,500	0
<i>Contract for plough dredging to be deferred. Budget used to extend in-house dredging on Lower Bure</i>						
Site restoration	Rockland, Hickling, Stokesby	-	-	-	£42,590	£33,540
<i>Stokesby rond restored with all sediment integrated along floodbank. Rockland planned for early October. Hickling planned for late October</i>						
TOTAL		36 / 82	40,000	20,390	£577,090	£352,925

^a –project costs includes staff time for all elements (pre-works ecological mitigation, site set-up, active dredging & site restoration); BA plant; & budgetary expenditure (equipment hire, survey costs, contractor costs, mitigation works, materials & consumables etc); within the reporting period.