

Environmental Impact Report

Underdog: The Other Other Brontë

Dorfman Theatre

Press Night: 4th April 2024



Photograph of Final Model Box

Introduction

At the end of 2023 and early 2024 the National theatre began contracting their Artists to commit to deliver a show that meets the Theatre Greenbook baseline standard. These reports are intended to capture anecdotal data that will feed into future practice and process when making large scale theatre to eventually deliver Advanced Greenbook standard as common practice. These reports are a documentation of both successes and challenges and are to be used as a tool for organisational learning and change – most importantly it will reflect the shared sense of environmental responsibility.

Principal Artistic and Production Team

Director -	Natalie Ibu
Writer -	Sarah Gordon
Set & Costume Designer –	Grace Smart
Lighting Designer –	Zoe Spurr
Sound Designer –	Alex Faye Braithwaite
Producer –	Fran Miller
Production Manager –	Clíona Ní Mhocháin

Show Summary

The play is an irreverent retelling of the life and legend of the Brontë sisters, and the story of the sibling power dynamics that shaped their uneven rise to fame. Charlotte Brontë has a confession about how one sister became an idol, and the other became known as the third sister. You know the one. No, not that one. The other, other one... Anne. This is not a story about well-behaved women. This is a story about the power of words. It's about sisters and sisterhood, love and jealousy, support, and competition.

Data from Material Trackers

Department	Actual Reuse	Future Life	TGB Standard Attained
Scenery	67%	*	Intermediate
Props	74%	*	Intermediate
Costume	78%	81%	Intermediate

**We are unable to put exact percentages on the future life of all scenery and props, however we can say with certainty that at least 70% of items used on this show went into storage for use on future shows.*

Design

Environmental sustainability was considered thoroughly during the design process for this show, with both Natalie Ibu (director) and Grace Smart (designer) driving this agenda and keen to reuse as much as possible throughout. There was a lot of collaboration and Clíona Ní Mhocháin (production manager) was very detail-driven regarding achieving theatre green book basic standard.

In the original design a purple cloth was desired, however this needed to be a very specific colour and would ultimately be made from a poly cloth, so Natalie and Grace decided to cut it. Similarly, rain was discussed for this production, but on learning the implications this had for scenic construction – the use of more raw materials as this would have required marine ply and water management – again, Natalie and Grace decided not to pursue the idea.

National Theatre

On the first day of rehearsals, Natalie announced to the acting company that rehearsal requests wouldn't necessarily hit the room next day, essentially implementing a 'cooling-off' period for all rehearsal ideas to prevent impulse-buying and creating unnecessary carbon impact.

During tech and previews, a few items were cut or amended which created a small amount of waste, for example, the plastic tubing for the fans which were cut down smaller. More last-minute orders were placed across all departments as the show edged closer to previews. However, due to the amount of work and diligence put into the design and build phases, the show was afforded the opportunity to allow for an organic creative process throughout tech and previews, where the schedule was tighter and while our minimum aim is basic standard only.

It was felt that the consideration of sustainability invigorated creativity on this production, rather than hampering it.

Scenery

Scenic Construction and Production collaborated with other theatres (such as the Royal Opera House) to make use of pre-used scenic elements, for example foliage that supplemented the foliage and grass sprigs used from NT storage (previously used on Dancing at Lughnasa).

Ecoboard was used for the floor on this production and this sheet material surpassed expectations in how well it worked for the final finish and texture. However, the heavy texturing does make it less likely that the floor can be recycled at the end of its life – there are questions about whether the idenden used prevents the material from being composted. There is also an argument that the time, labour and financial cost of treating Ecoboard to enable a similar finish as that of ply, doesn't outweigh just using stock ply.

In the spirit of circular economy, it was possible to re-use a 7.5 metre inner revolve from storage for this production, for which Construction created modular extensions that did require the use of raw material but does make our stock revolves more versatile as we can adapt the sizes easily, without building an entirely new revolve. NT modular 8x4 flats for the side walls and stock steeldecks for infills were also utilised from storage. More than 150kg of material used to build the scenery was either repurposed from other shows, reused materials or off cuts.

The flown metal frame turned out to be more complex than Construction originally costed for and therefore more raw material was used. The weight of the revolve and Ecoboard offset this in the materials tracker, but this should be noted. More drawings and detail at the feasibility and costing stage may have mitigated for this.

Expensive, re-usable cable ties that were bought for fixing the foliage to the metal frame will be extremely hard to access to unclip and therefore re-use. Therefore, it is quite likely that these will be cut off for ease and speed in the get out. More time for disassembly is crucial to salvaging more materials for reuse.

National Theatre

There was a desire to use stock doors for this production, however it would have required huge alterations to them which would have cost a great deal of labour but also would have prohibited future life for those doors. Instead, Grace (designer) and the carpenters collaborated to problem-solve this which resulted in the bathroom door being made from salvaged ply as it didn't need to be full thickness or to function, and therefore we were able to 'cheat' it. On this occasion, there was time in the workshop schedule to collaborate in this way, which isn't always possible when building multiple shows concurrently.

Props

Props felt that both designer and director were sensitive to the green agenda and were collaborative and flexible in their creative approach – they and props would try to take the 'green' option even when this meant compromising or rethinking an idea. For example, for the smashed glass in the script, Props sampled a smashable acrylic glass to replace traditional but expensive and unsustainable sugar-glass options, which unfortunately didn't behave with the desired effect. When the sustainability and financial implications were explained, both director and designer decided to cut this element from the show. This resulted in a majority of the props coming from NT stores or from second hand retailers.

Where it was not possible to source second hand, Props made some items new, for example, the kitchen table which needed to be a very particular size, with functioning leaves and drawers. Scrap material was used wherever possible, and on this production Props made use of scrap Perspex and MDF. Stage Management attempted to use one mattress for the two single beds used at different points in the show, however it became evident that they couldn't swap the mattress and bedding in time during the scene change to Props had to purchase a second mattress for practicality.

Discussions were had early in the process, and it was decided to limit the amount eaten on stage, and this greatly reduced the amount of food purchased and food waste produced.

Costume Production

Most of the costumes came from NT stock and Costume achieved 67% re-used and recycled costume. Because of the large amount of stock used for the show the amount of time needed for alterations exceeded the planned time frame which meant that the staffing budget went over. It is very difficult to foresee the time needed for alterations as they can take much longer and be more complex than expected but Costume can use this show as a template for further planning for similar-sized period shows.

Originally, there were four 'critic' characters in the show, and this was upped to five after the material had already been purchased for their cloaks. Natalie and Grace collaborated with Costume to redesign the cloaks to achieve five cloaks out of the material bought for just four, which prevented us purchasing any more new material or creating additional deliveries.

Wigs, Hair and Make-up

There weren't many wigs, hair and make-up elements on this show, but the environmental impact of the small amount that was used was considered. Wigs, Hair and Make Up (WH&M) made the moustaches in-house and these will have a future life after this show is finished. WH&M utilised improved dyeing practices which negated the need to buy blue plastic hair from China.

Lighting

All the batteries used by Lighting on this production are rechargeable, and 70% of the batteries were ones the NT already owned.

Unfortunately, it wasn't possible to consolidate orders or always use the most sustainable suppliers used when procuring elements for the Practicals. This was due to a short lead time between decisions and needing the stock.